

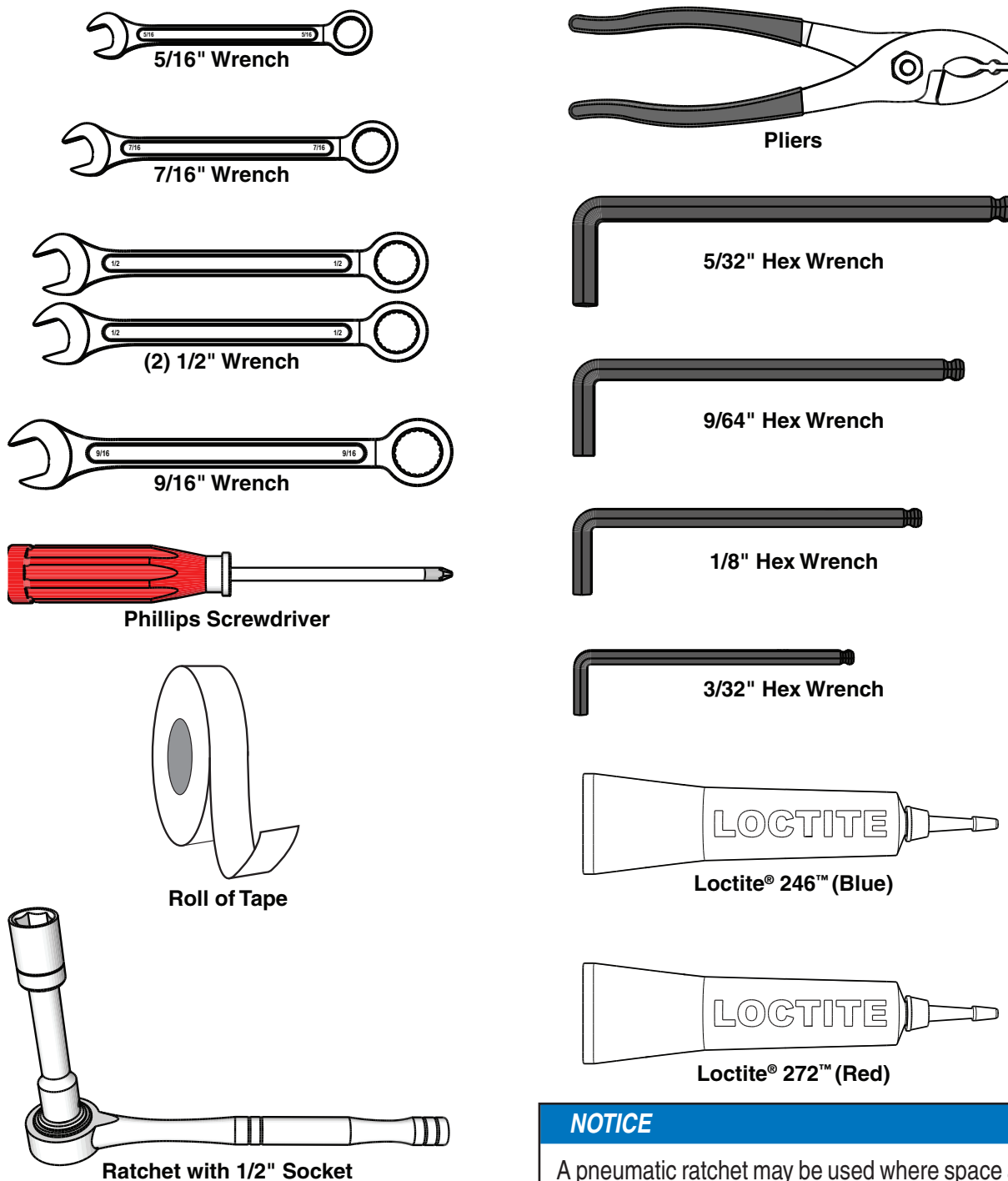


JS36MLE Walk-Behind Trowel

Manual Clutch Installation/Engine Mounting Instructions

The following instructions are intended to assist the user in the installation of the engine and manual clutch for use on the JS36MLE walk-behind trowel. Please read all assembly instructions before installing this kit.

REQUIRED TOOLS



NOTICE

A pneumatic ratchet may be used where space allows.
DO NOT use an impact wrench.

Figure 1. Required Tools

PARTS

Verify that all parts are accounted for. See Figure 2 and Table 1.

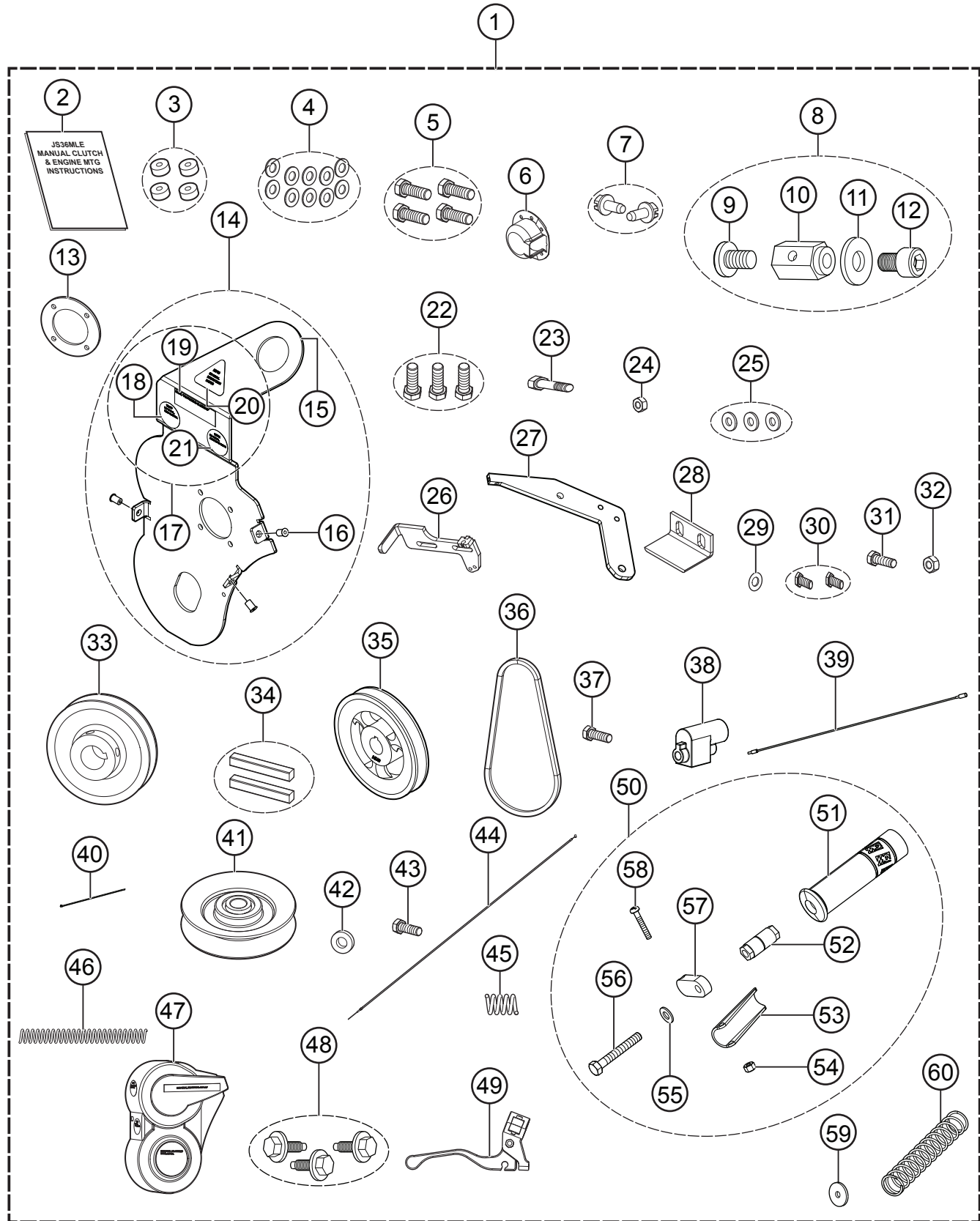


Figure 2. Manual Clutch and Engine Mounting Kit

Table 1. JS36MLE Manual Clutch/Engine Mtg Kit

Item No.	Part No.	Description	QTY.	Remarks
1	32903	Manual Clutch/Engine Mtg Kit, JS36MLE	1	Includes Items 2–58
2	24559	Instruction Sheet	1	
3	21996	Spacer, 1.00 OD X .328 ID X .438 THK	4	
4	933241	Washer, Flat 5/16 Grd 9	10	
5	22024	Screw, HHC 5/16-24 X 1 3/4 Gr 5	4	
6	1834	Deflector Assy, Exhaust, Engine	1	
7	1273	Screw, Hex Head, Self-Tapping 8-32 X 3/8	2	
8	20845	Swivel Assy, Throttle Cable	1	Includes Items 9–12
9	20842	Screw, PHP #8-32 X 0.25	1	
10	20844	Housing, Swivel Throttle Cable	1	
11	15173	Washer, Flat, #8	1	
12	20968	Screw, SHC 8-32 X 1/4	1	
13	21915	Spacer Plate, Lifting Bail	1	
14	24493	Lifting Bail Assy w/ Decals	1	Includes Items 15–21
15	24494	Plate, Lifting Bail	1	
16	19266	Nut, Blind 1/4-20 X .027-.165	4	
17	24501	Decal Kit, Lift Bail	1	Includes Items 18–21
18	23699	ISO Decal, Read Manual	1	
19	36099	Decal, Safety	1	
20	23700	ISO Decal, Lifting/Crush Hazard	1	
21	23701	ISO Decal, Ask for Training	1	
22	10229	Screw, HHC 5/16-24 X 1	3	
23	26250	Screw, HHC 1/4-20 X 1 3/4	1	
24	0949	Nut, Hex Finish 1/4-20	1	
25	0948	Washer, Flat 1/4	3	
26	24490	Bracket, Clutch JS36M (Silver)	1	
27	24561	Lever, Clutch (Silver)	1	
28	24562	Shoe, Clutch Lever (Silver)	1	
29	10136	Washer, Flat 3/8	1	
30	1579	Screw, HHC 1/4-20 X 1/2	2	

Table 1. JS36MLE Manual Clutch/Engine Mtg Kit (Continued)

Item No.	Part No.	Description	QTY.	Remarks
31	1391	Screw, HHC 5/16-24 X 1 1/2	1	
32	6014 C	Nut, Hex Finish 5/16-24	1	
33	11043	Pulley, AK41 X 3/4	1	
34	0627	Key, SQ 3/16 X 1-1/4	2	
35	11049	Pulley, AK49 X 3/4	1	
36	0152 3	V-Belt, A28 Gates Hi Power II	1	
37	1284	Screw, HHC 3/8-16 X 1 1/2	1	
38	1475	Connector, Splice Tap	1	
39	1488	Wire, Safety Switch	1	
40	1662	Tie, Cable, Black	1	
41	10608	Pulley, Idler, 2.63 OD X 3/8 Bore	1	
42	1897	Spacer, 3/4 X 3/8 X 3/16L	1	
43	32527	Screw, HHC 10-32 X 3/4 SS	1	
44	11097	Cable, Manual Clutch	1	
45	10449	Spring, Clutch Engage	1	
46	10670	Spring, Clutch Return	1	
47	24567	Belt Cover, Notched w/ Decals	1	
48	30119	Screw, 1/4-20 X 7/8 Ind Hex, Dog Pt	3	
49	391512	Lever, Hand Clutch Control	1	
50	10036	Handle Assy, Clutch Assist	1	Includes Items 51–58
51	23611	Grip, Handle, 0.875 W/ .63 Hole	1	
52	10033	Anchor, Double Expansion	1	
53	10034	Handle, Clutch Assist	1	
54	10019	Nut, Nyloc 10-32	1	
55	0300 B	Washer, Flat SAE 5/16	1	
56	0669 A	Screw, HHC 5/16-18 X 2 1/4	1	
57	10030	Plate, Clutch Assist	1	
58	11942	Screw, PHP 10-32 X 1-1/4	1	
59	2880	Washer, Retention	1	
60	21746	Spring, Primary Throttle Return	1	

WORK SAFELY!

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

INITIAL PREPARATION

In addition to the preceding tools and kit components, a Honda GX160 engine and either a standard (SXHS) or Quick Pitch™ (QXHS) handle assembly are required to complete this installation.

1. Make sure your engine is turned off and cool.
2. Place the trowel components in an area free of dirt and debris, and make sure they are on a secure, level surface.

HANDLE INSTALLATION

1. Install either the standard (SXHS) handle or Quick Pitch™ (QXHS) handle onto the JS36MLE base unit. Refer to the handle installation instructions provided with the unit.
2. Attach the clutch control hand lever (P/N 391512) to either side of the handle at a comfortable angle for the operator, and tighten the clamping screws securely. See Figure 3.



Figure 3. Clutch Control Hand Lever Installation

3. Remove and discard the existing handle grip on the clutch lever side (Figure 4).

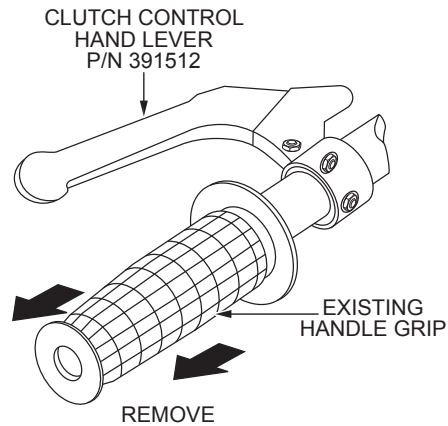


Figure 4. Existing Handle Grip Removal

4. Install the new handle grip (P/N 23611) onto the handle. See Figure 5.

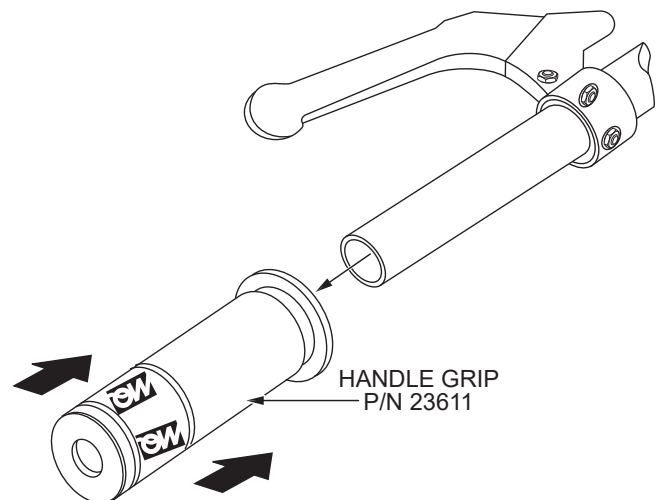


Figure 5. Handle Grip Installation

5. Insert the end of the assembled expansion anchor (P/N 10033) through the handle grip (P/N 23611) and into the handle tube. See Figure 6.



Figure 6. Expansion Anchor Installation

6. Insert the clutch assist assembly (P/N 10036) into the handle grip (P/N 23611) and push it in until the spacer goes through the hole in the handle grip. See Figure 7.

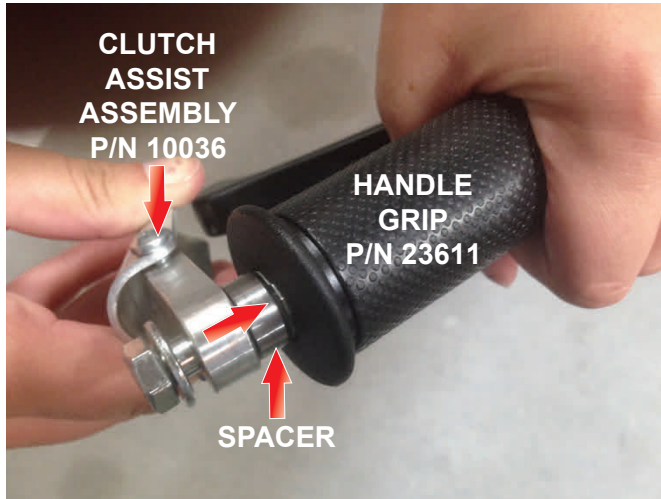


Figure 7. Clutch Assist Installation

7. Tighten the screw (P/N 0669 A) on the end of the clutch assist assembly (Figure 8). Make sure the clutch assist handle (P/N 10036) is aligned with the clutch control hand lever (P/N 391512) as shown in Figure 9.



Figure 8. Secure Clutch Assist Handle



Figure 9. Clutch Assist Handle Alignment

ENGINE MOUNTING

Perform the following procedure to mount your Honda GX160 engine to the trowel assembly. Refer to Figure 10.

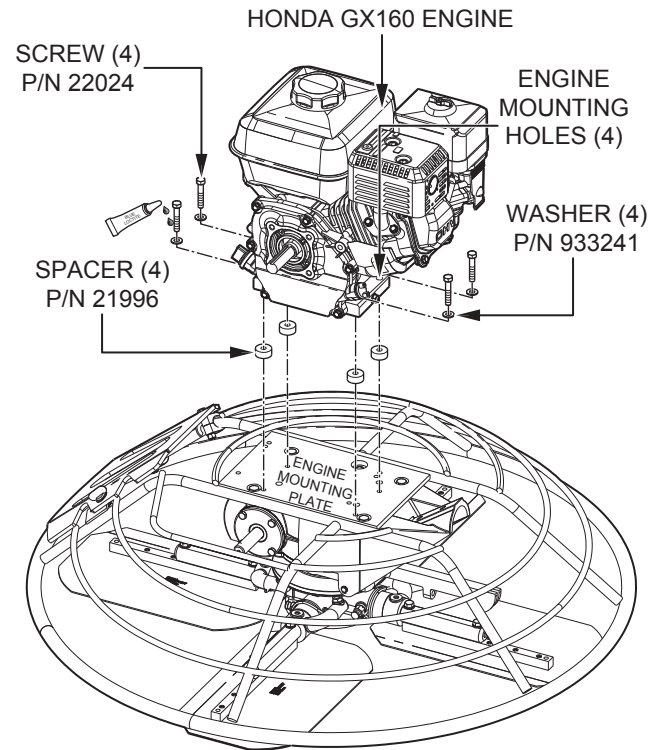


Figure 10. Engine Mounting

1. Place the four spacers (P/N 21996) on top of the engine mounting plate, and align them with the four 5/16-24 mounting holes in the plate.
2. Carefully place your Honda GX160 engine onto the engine mounting plate. Make sure the four engine mounting holes are aligned with the four spacers (P/N 21996) and the four 5/16-24 engine mounting holes in the engine mounting plate.
3. Apply Loctite® 246™ to the male threads on the four screws (P/N 22024).
4. Secure the engine to the engine mounting plate by inserting the four screws (P/N 22024) through four washers (P/N 933241) and the four engine mounting holes and spacers (P/N 21996). Tighten each of the screws to 23 ft-lbf (31 N·m).

ENGINE PREPARATION

1. Attach the exhaust deflector (P/N 1834) to the engine muffler with two screws (P/N 1273), and tighten securely. See Figure 11.

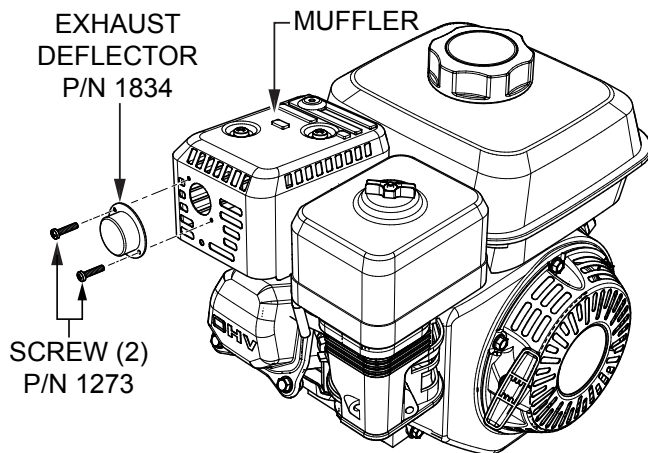


Figure 11. Exhaust Deflector Installation

2. Remove the outer wing nut from the air filter cover, then remove the air filter cover (Figure 12). Set the wing nut and cover aside.

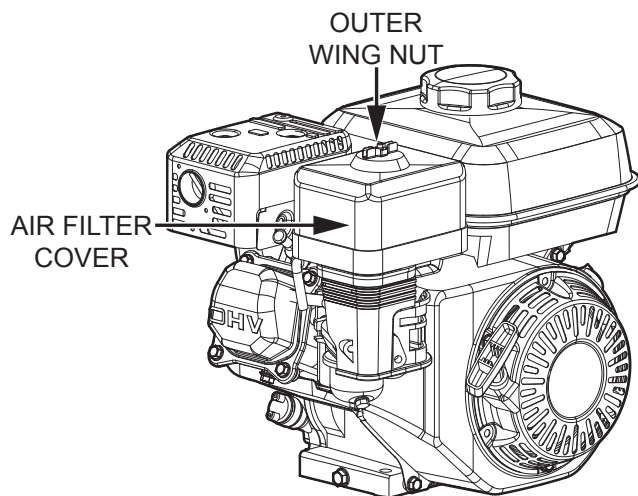


Figure 12. Air Filter Cover Removal

3. Remove the inner wing nut from the air filter, then remove the air filter (Figure 13). Set the wing nut and air filter aside.

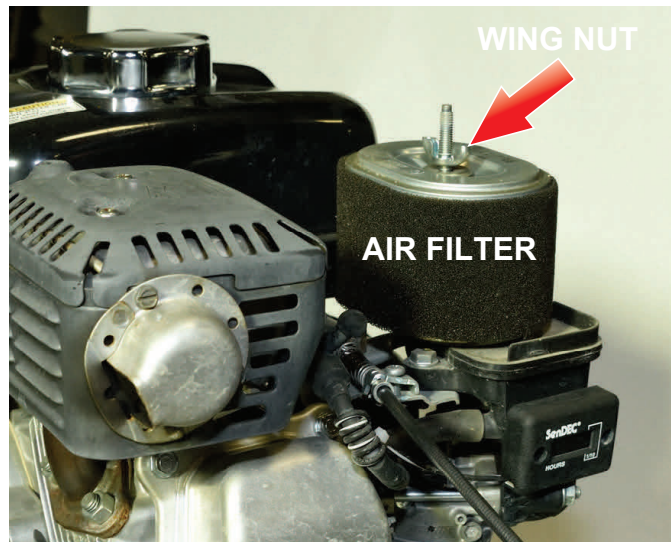


Figure 13. Air Filter Removal

4. **LOOSEN** the nut on the throttle lever (Figure 14) until the throttle lever moves freely. **DO NOT** remove the nut.

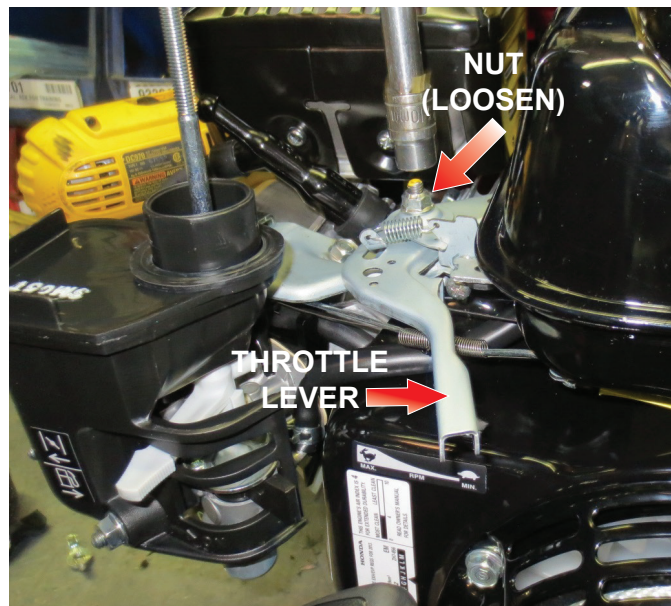


Figure 14. Loosen Throttle Lever Nut

- Remove the screw (P/N 20968) and washer (P/N 15173) from the throttle cable swivel assembly (P/N 20845). See Figure 15.

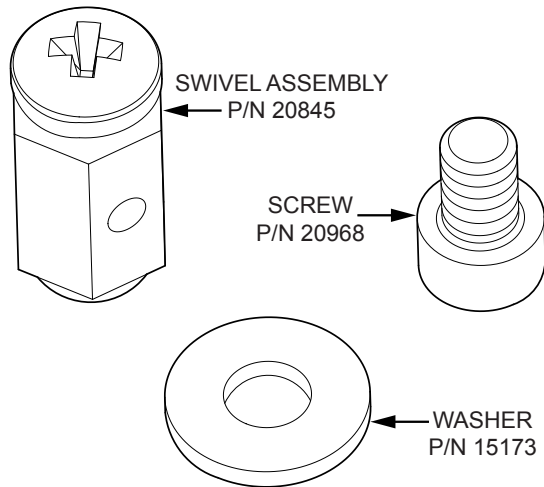


Figure 15. Throttle Cable Swivel Disassembly

- LOOSEN** the screw (P/N 20842), but **DO NOT** remove the screw from the throttle cable swivel housing (P/N 20844). The screw is loose enough when it is no longer visible inside the housing (Figure 16).

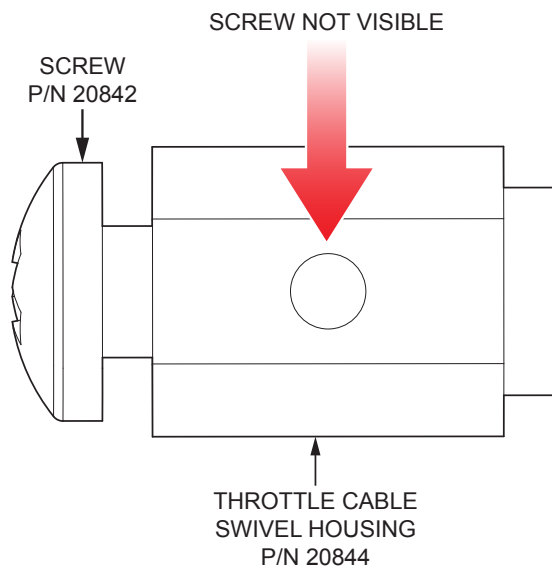


Figure 16. Loosen Screw Inside Swivel Housing

- Apply Loctite® 272™ to the male threads on the screw (P/N 20968). See Figure 17.

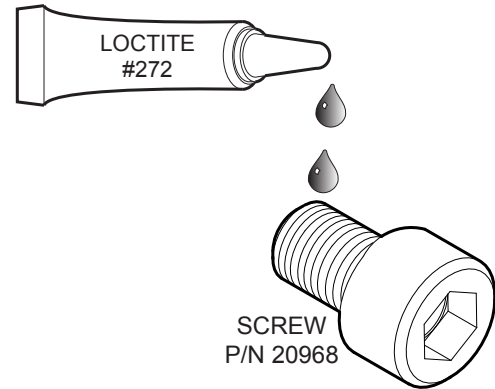


Figure 17. Applying Loctite® 272™ (Screw)

- Insert the screw (P/N 20968) through the washer (P/N 15173). See Figure 18.

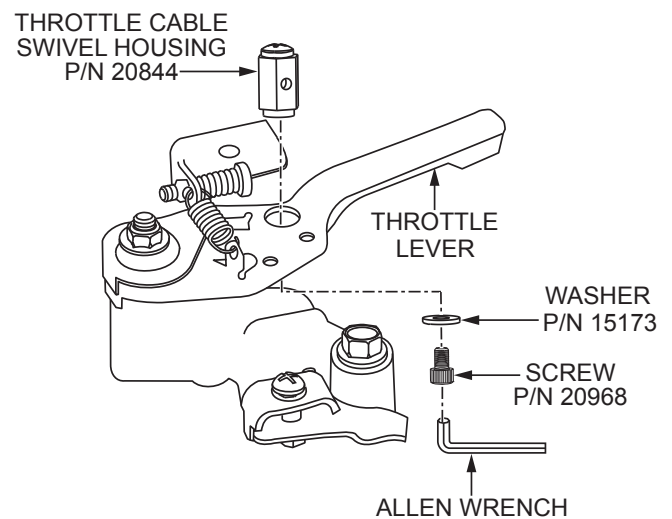


Figure 18. Throttle Cable Swivel Housing Installation

- From **underneath** the throttle lever, insert the screw (P/N 20968) with washer (P/N 15173) through the hole in the throttle lever. See Figure 18.
- Attach the throttle cable swivel housing (P/N 20844) to the screw (P/N 20968). See Figure 18.

11. Tighten the throttle cable swivel housing (P/N 20844) securely. See Figure 19.

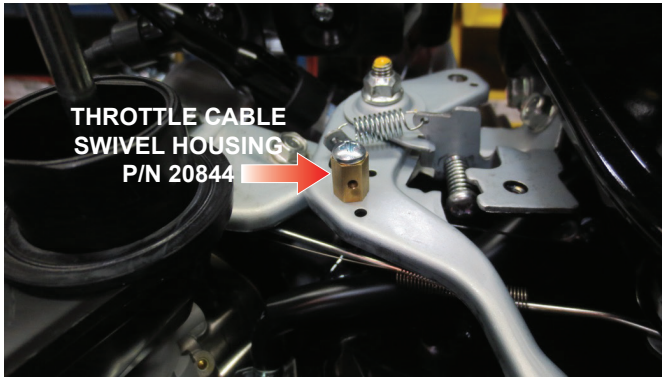


Figure 19. Secure Throttle Cable Swivel Housing

12. Locate the oil sending unit (Figure 20) on the side of the engine opposite the air cleaner.



Figure 20. Oil Sending Unit Location

13. Place the splice tap connector (P/N 1475) onto the yellow wire extending from the oil sending unit as shown in Figure 21. Make sure the open female receptacle on the splice tap connector points downwards.

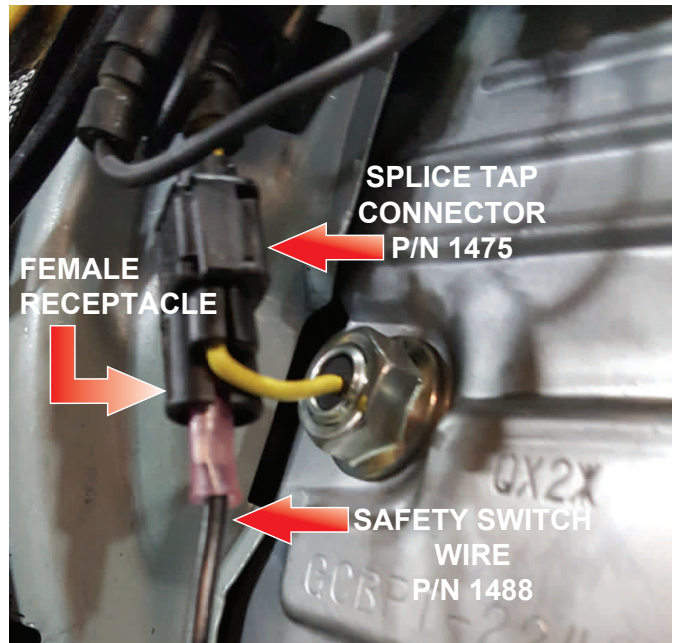


Figure 21. Splice Tap Connector and Safety Switch Wire Installation

14. Insert the male bullet terminal on the safety switch wire (P/N 1488) into the open female receptacle on the splice tap connector (P/N 1475). See Figure 21.
15. Route the safety switch wire (P/N 1488) down to the base of the engine, then to the other end of the engine (past the crank shaft). Secure the safety switch wire to the guard ring with the tie wrap (P/N 1662).

LIFTING BAIL INSTALLATION

Refer to Figure 22.

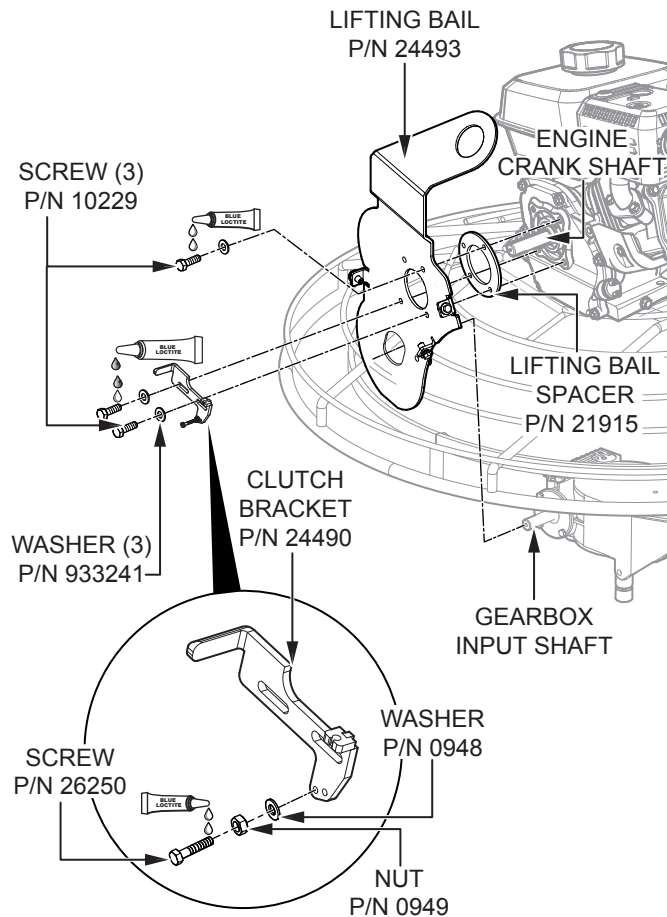


Figure 22. Lifting Bail Installation

1. Place the lifting bail spacer (P/N 21915) onto the engine crank shaft.
2. Place the lifting bail (P/N 24493) onto the engine crank shaft and gearbox input shaft.
3. Apply Loctite® 246™ to the male threads on a screw (P/N 10229).
4. Insert the screw (P/N 10229) through a washer (P/N 933241).
5. Align the four holes in the lifting bail (P/N 24493) with the four holes in the lifting bail spacer (P/N 21915) and the four holes surrounding the engine crank shaft. Insert the screw (P/N 10229) with washer (P/N 933241) into the top right hole. **DO NOT** tighten the screw at this time.
6. Place the nut (P/N 0949) and a washer (P/N 0948) onto the screw (P/N 26250).

7. Apply Loctite® 246™ to the male threads on the screw (P/N 26250).
8. Insert the screw (P/N 26250) with nut (P/N 0949) and washer (P/N 0948) into the bottom left hole in the clutch bracket (P/N 24490). **DO NOT** allow the screw to extend beyond the back side of the clutch bracket. Tighten the nut securely.
9. Apply Loctite® 246™ to the male threads on two screws (P/N 10229).
10. Insert the two screws (P/N 10229) through two washers (P/N 933241).
11. Insert the two screws (P/N 10229) with washers (P/N 933241) through the top two holes in the clutch bracket (P/N 24490) and the bottom two holes in the lifting bail (P/N 24493). Make sure the screws are threaded into the bottom two holes surrounding the engine crank shaft, but **DO NOT** tighten the screws at this time.
12. Tighten the initial screw (P/N 10229), located at the top right of the four lifting bail holes, to 23 ft-lbf (31 N·m).

CLUTCH LEVER INSTALLATION

Refer to Figure 23.

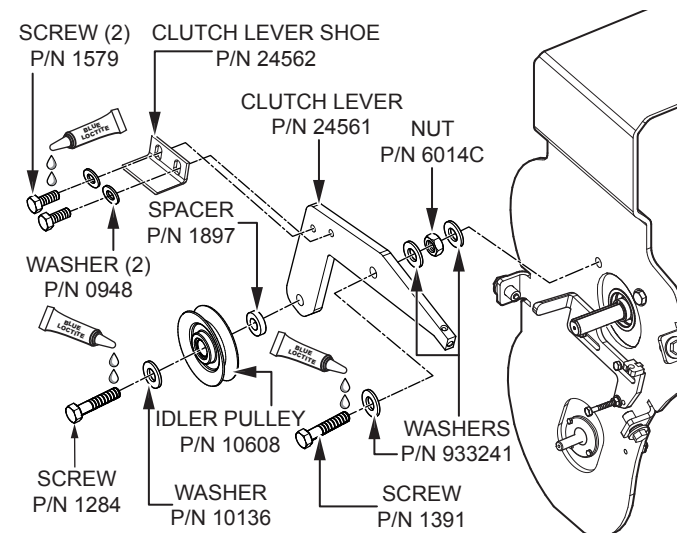


Figure 23. Clutch Lever Installation

1. Place a washer (P/N 0948) onto each of the two screws (P/N 1579).
2. Apply Loctite® 246™ to the male threads on the two screws (P/N 1579).

3. Attach the clutch lever shoe (P/N 24562) to the clutch lever (P/N 24561) with the two screws (P/N 1579) and washers (P/N 0948). **DO NOT** tighten the screws at this time.
4. Place the washer (P/N 10136) onto the screw (P/N 1284), and insert the screw through the center of the idler pulley (P/N 10608).
5. Place the spacer (P/N 1897) onto the screw (P/N 1284).
6. Apply Loctite® 246™ to the male threads on the screw (P/N 1284).
7. Insert the screw (P/N 1284) into the clutch lever (P/N 24561) and tighten to 23 ft-lbf (31 N·m).
8. Place a washer (P/N 933241) onto the screw (P/N 1391).
9. Insert the screw (P/N 1391) into the clutch lever (P/N 24561).
10. Place another washer (P/N 933241), then the nut (P/N 6014 C), then another washer (P/N 933241) onto the screw (P/N 1391).
11. Apply Loctite® 246™ to the last 1/2 inch (12.7 mm) of threads on the screw (P/N 1391).
12. Install the clutch lever (P/N 24561) assembly by inserting the screw (P/N 1391) into the open, top left lifting bail hole. Make sure the screw is threaded into the top left hole surrounding the engine crank shaft, and tighten securely. Once the screw is fully tightened, there should be no space remaining between the nut (P/N 6014 C) and washers (P/N 933241).
13. Hold the screw (P/N 1391) in place, and tighten the nut (P/N 6014 C) to approximately 23 ft-lbf (31 N·m).

NOTICE

Once installed, the clutch lever (P/N 24561) should pivot freely with no binding, rattling, or side-to-side movement.

UPPER PULLEY INSTALLATION

Refer to Figure 24.

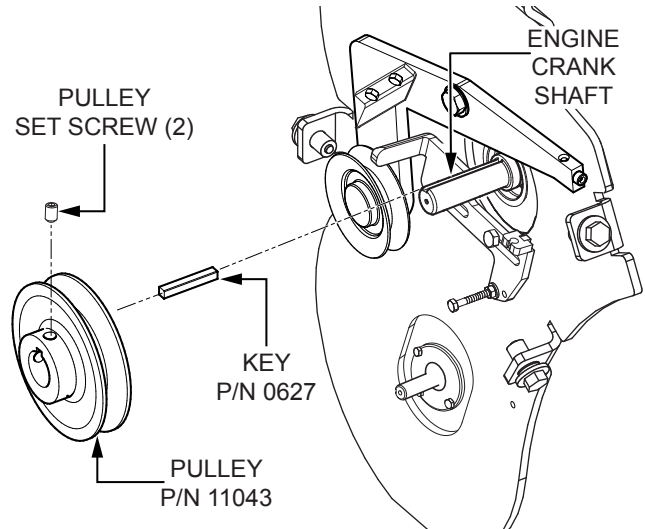


Figure 24. Upper Pulley Installation

NOTICE

A pair of set screws is included with the upper pulley (P/N 11043).

1. Insert a key (P/N 0627) into the key way groove on the engine crank shaft.
2. Slide the upper pulley (P/N 11043) onto the engine crank shaft. The distance between the pulley and the clutch lever screw should be approximately 1–1½ mm (Figure 25). **DO NOT** tighten the pulley set screws at this time.

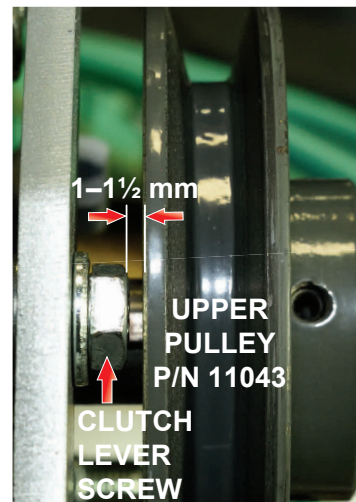


Figure 25. Pulley Gap Distance

LOWER PULLEY INSTALLATION

Refer to Figure 26.

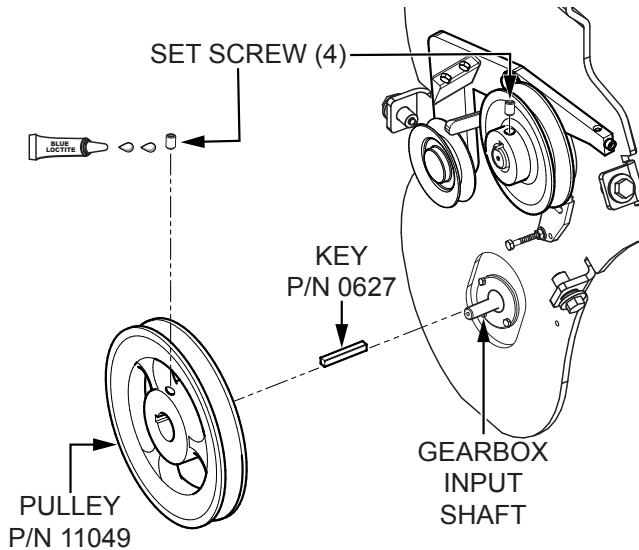


Figure 26. Lower Pulley Installation

NOTICE

A pair of set screws is included with the lower pulley (P/N 11049).

1. Insert a key (P/N 0627) into the key way groove on the gearbox input shaft.
2. Slide the lower pulley (P/N 11049) onto the gearbox input shaft.
3. Align all three pulleys (idler, upper, and lower) with a round, straight, 1/2-inch (12.7 mm) diameter rod, as shown in Figure 27.

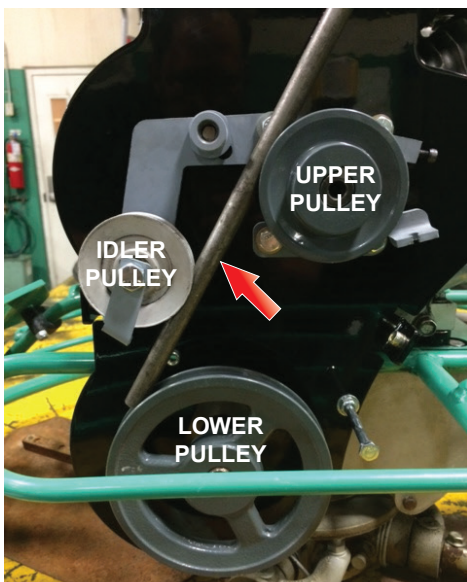


Figure 27. Pulley Alignment

4. Install the V-belt (P/N 0152 3) by pulling it over the upper pulley (P/N 11043) and the idler pulley (P/N 10608), then rolling the belt onto the lower pulley (P/N 11049). See Figure 28.

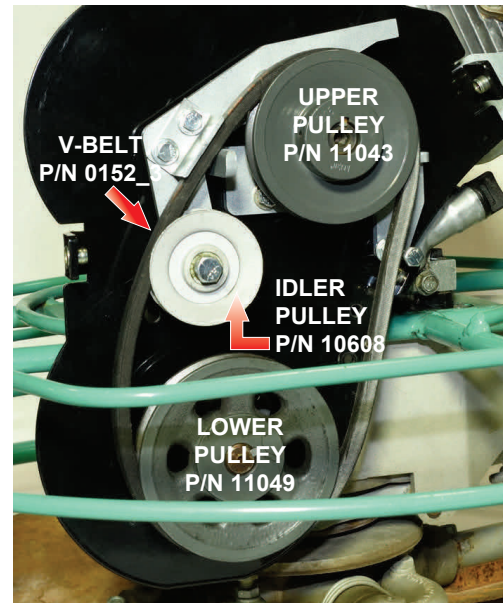


Figure 28. V-Belt Installation

5. Remove all four pulley set screws (two upper, two lower), and apply Loctite® 246™ to the threads of each screw.
6. Insert all four pulley set screws (two upper, two lower), and tighten securely.

CLUTCH CABLE INSTALLATION

1. Make sure the clutch cable adjustment ferrule is placed onto the end of the clutch cable (P/N 11097). See Figure 29.

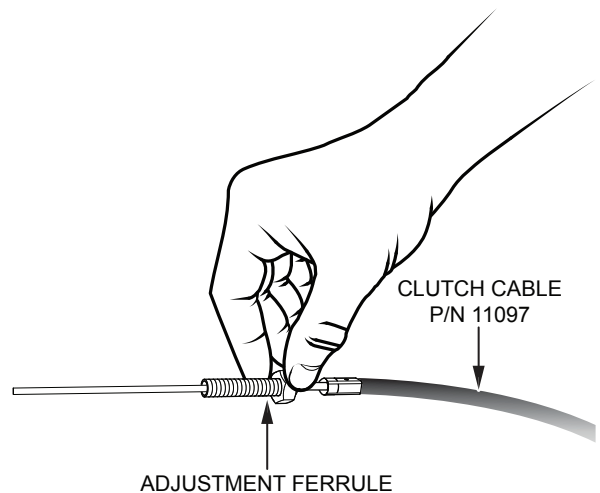


Figure 29. Adjustment Ferrule Placement

- Place the clutch engagement spring (P/N 10449) onto the end of the clutch cable (P/N 11097). See Figure 30.

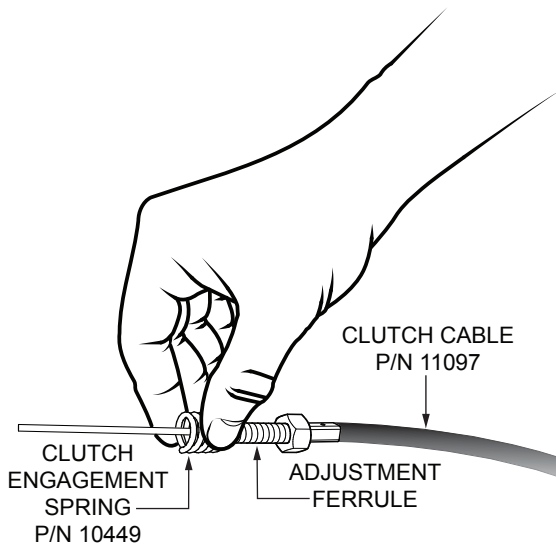


Figure 30. Clutch Engagement Spring Placement

- Place the retention washer (P/N 2880) onto the end of the clutch cable (P/N 11097).

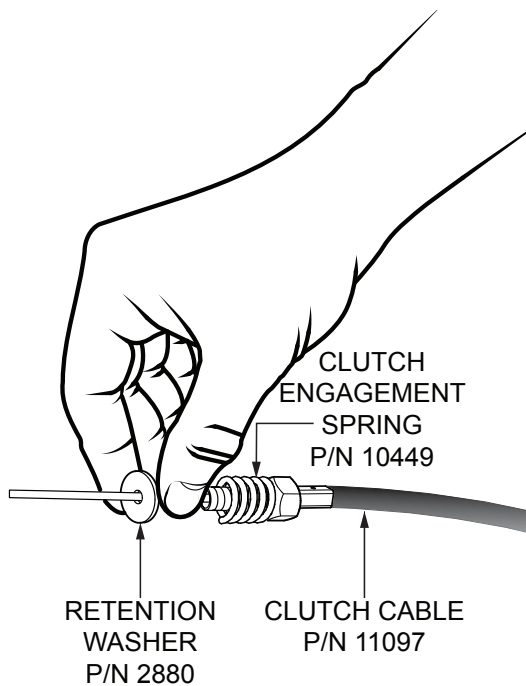


Figure 31. Retention Washer Placement

- Place the clutch return spring (P/N 10670) onto the end of the clutch cable (P/N 11097). See Figure 32.

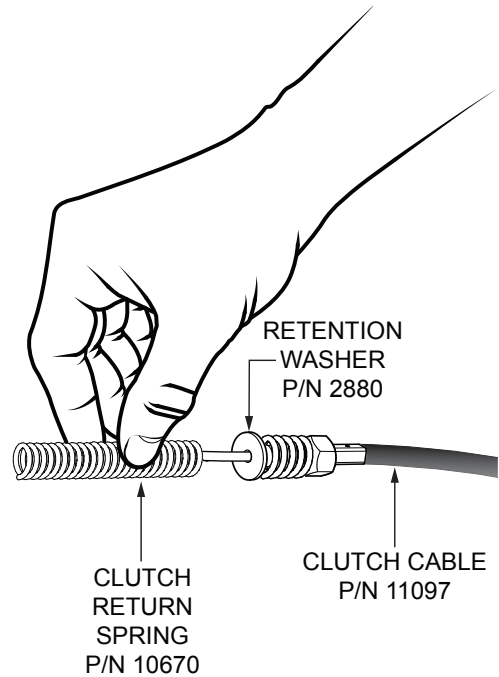


Figure 32. Clutch Return Spring Placement

- Insert the clutch cable (P/N 11097) through the clutch bracket (P/N 24490) and clutch lever (P/N 24561) as shown in Figure 33. The clutch return spring (P/N 10670) should fit between the clutch bracket and clutch lever. The retention washer (P/N 2880) should rest between the clutch return spring and the clutch bracket. The adjustment ferrule should extend through the clutch lever as shown.

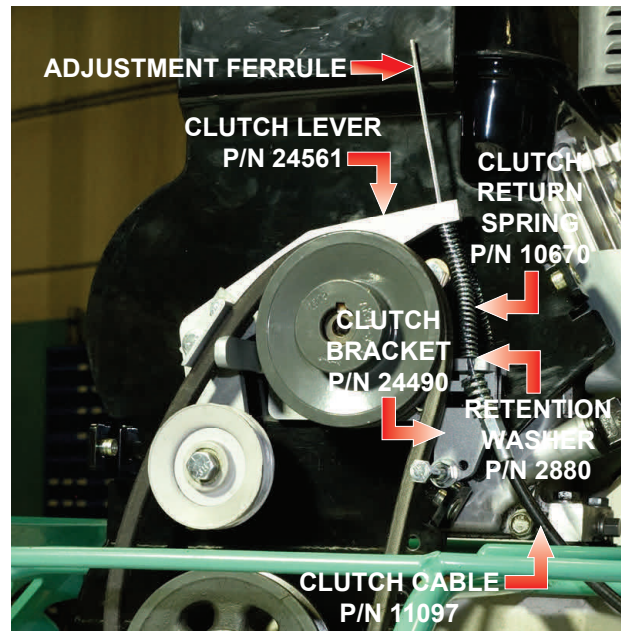


Figure 33. Clutch Cable Installation

6. Insert the free end of the clutch cable (P/N 11097) into the clutch control hand lever (P/N 391512). Make sure the adjustment ferrule is fully seated and the adjustment screw is tightened securely. See Figure 34.

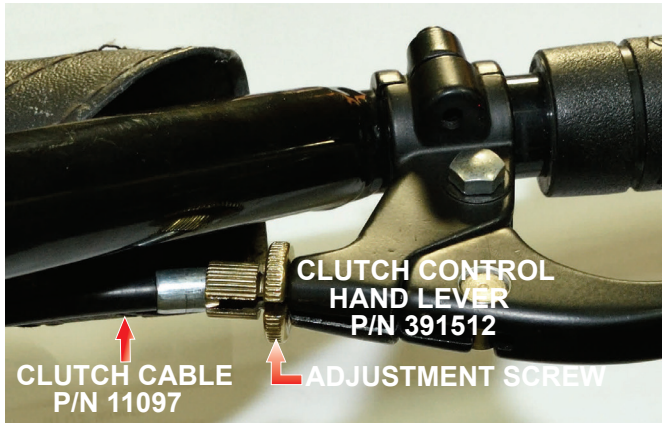


Figure 34. Clutch Cable to Hand Lever Connection

7. Engage the clutch control hand lever (P/N 391512) and tape the clutch assist handle (P/N 10036) in place as shown in Figure 35.

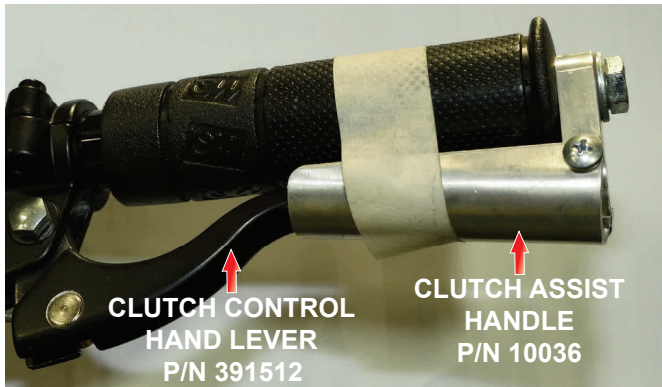


Figure 35. Engage and Tape Clutch Hand Lever

8. Pull the clutch cable (P/N 11097) with pliers to eliminate all slack from the V-belt (P/N 0152 3). See Figure 36.

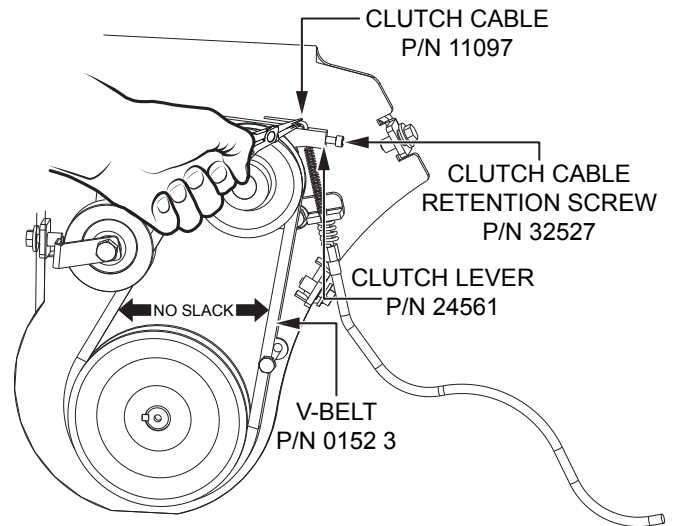


Figure 36. Clutch Cable Retention Screw Installation

9. While holding the clutch cable (P/N 11097) to eliminate slack from the V-belt (P/N 0152 3), insert the clutch cable retention screw (P/N 32527) into the clutch lever (P/N 24561) and tighten securely. See Figure 36.
10. Remove the tape from the clutch control hand lever (P/N 391512).
11. Squeeze the clutch control hand lever (P/N 391512) a few times to eliminate any slack remaining in the clutch cable (P/N 11097). If the V-belt (P/N 0152 3) requires more tension, unscrew the adjustment ferrule as necessary. See Figure 37.



Figure 37. Clutch Cable Adjustment

CLUTCH BRACKET ADJUSTMENT

1. Pull the clutch control hand lever (P/N 391512) and tape the clutch assist handle in place again as shown in Figure 35.
2. Position the clutch bracket (P/N 24490) so there is between 1/4 inch (6 mm) and 3/8 inch (9 mm) between the V-belt (P/N 0152 3) and the clutch bracket arm. Tighten the two screws (P/N 10229) securing the clutch bracket to 23 ft-lbf (31 N·m). See Figure 38.

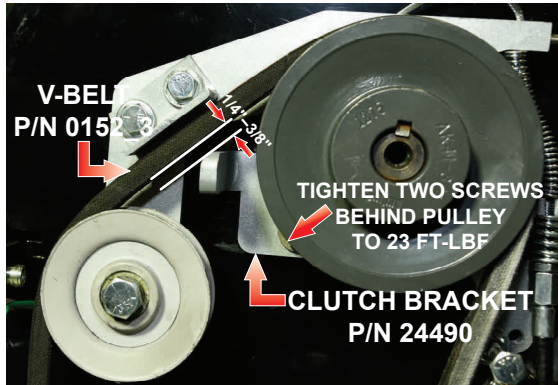


Figure 38. Clutch Bracket Adjustment

3. Remove the tape from the clutch control hand lever (P/N 391512).
4. Press down **lightly** on the clutch lever shoe (P/N 24562) and tighten the two screws (P/N 1579) securing the shoe to 17 ft-lbf (23 N·m). See Figure 39.

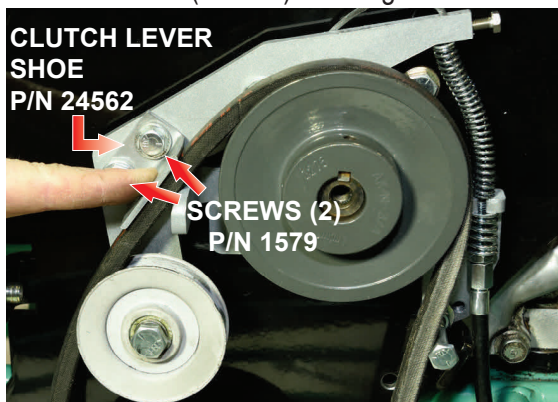


Figure 39. Clutch Lever Shoe Adjustment

5. Inspect the V-belt (P/N 0152 3). With the clutch control hand lever (P/N 391512) **disengaged**, the V-belt should contact the clutch lever shoe (P/N 24562), the arm of the clutch bracket (P/N 24490), and the screw (P/N 26250) at the bottom of the clutch bracket. With the clutch control hand lever **engaged**, there should be between 1/4-inch (6 mm) and 3/8-inch (9 mm) clearance in these three locations. See Figure 40.

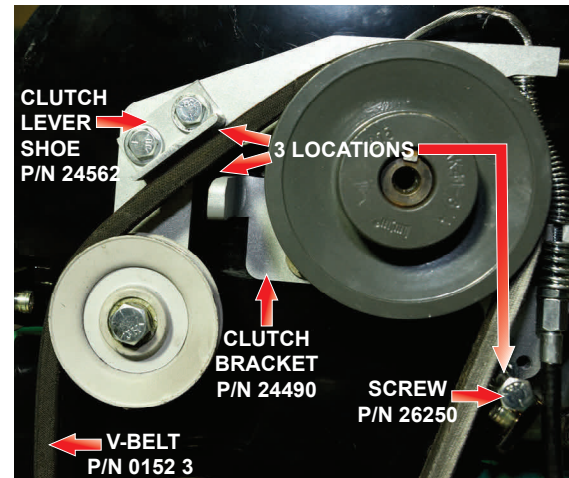


Figure 40. V-Belt Inspection

BELT COVER INSTALLATION

1. Place the belt cover (P/N 24567) over the V-belt (P/N 0152 3) and pulleys. Make sure the clutch cable (P/N 11097) extends through the cut-out in the belt cover. See Figure 41.

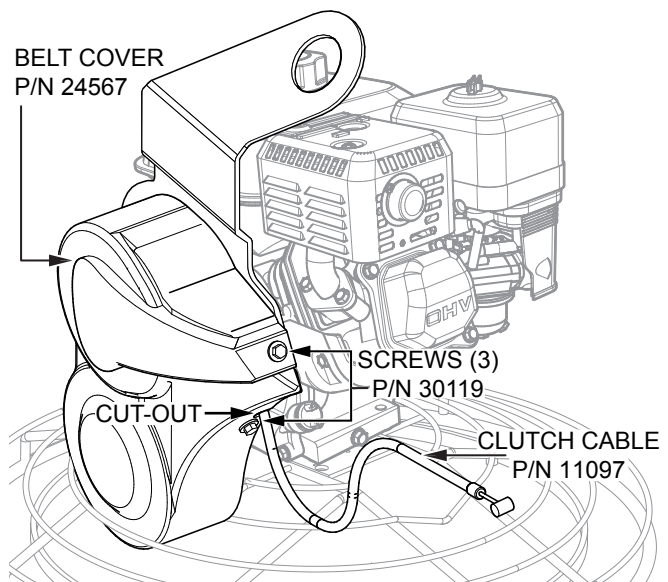


Figure 41. Belt Cover Installation

2. Secure the belt cover (P/N 24567) to the trowel assembly with three screws (P/N 30119), and tighten securely. See Figure 41.

THROTTLE AND CENTRIFUGAL STOP SWITCH CONNECTIONS

Connect the throttle and centrifugal stop switch according to the handle installation instructions provided with the handle.

TESTING

Perform the following procedure to test the trowel for proper clutch operation.

NOTICE

Make sure the engine oil and gearbox oil levels are adequate before testing the unit.

1. Reinstall the engine air filter and air filter cover that were removed earlier, and secure with the air filter wing nuts.
2. Start the engine and allow it to idle. The rotor should remain perfectly still (**NO** creep).
3. Increase the engine to full speed. The rotor should continue to remain perfectly still (**NO** creep).
4. Fully engage the clutch control hand lever (P/N 391512). The rotor should rotate.
5. Disengage the clutch control hand lever (P/N 391512). The rotor should stop and should **NOT** creep.

NOTICE

If the rotor creeps with the clutch control hand lever (P/N 1512) disengaged, the clutch lever shoe (P/N 24562) may not be tight enough. If the rotor stops abruptly when the clutch control hand lever is released, the clutch lever shoe may be too tight. Refer to the **Clutch Bracket Adjustment** section and adjust as necessary.



JS36MLE Walk-Behind Trowel

Manual Clutch Installation/Engine Mounting Instructions

HERE'S HOW TO GET HELP

PLEASE HAVE THE MODEL AND SERIAL
NUMBER ON-HAND WHEN CALLING

CHINA

MQ Shanghai, China

No. 1355 Heng Cang Road
Ma Lu Town Jia Ding District
Shanghai, China 201818

Tel. 011 86 21 59512076
Fax 011 86 21 59512336

Contact: Xiwen Shi
xshi@multiquip.com

UNITED KINGDOM

Multiquip (UK) Limited Head Office

Unit 2, Northpoint Industrial Estate, Globe
Lane,
Dukinfield, Cheshire SK16 4UJ
Contact: sales@multiquip.co.uk

Tel: 0161 339 2223
Fax: 0161 339 3226

UNITED STATES

Multiquip Corporate Office

18910 Wilmington Ave.
Carson, CA 90746
Contact: mq@multiquip.com

Tel. (800) 421-1244
Fax (310) 537-3927

© COPYRIGHT 2017, MULTIQUIP INC.

Multiquip Inc and the MQ logo are registered trademarks of Multiquip Inc. and may not be used, reproduced, or altered without written permission. All other trademarks are the property of their respective owners and used with permission.

The information and specifications included in this publication were in effect at the time of approval for printing. Illustrations, descriptions, references and technical data contained in this document are for guidance only and may not be considered as binding. Multiquip Inc. reserves the right to discontinue or change specifications, design or the information published in this publication at any time without notice and without incurring any obligations.

Your Local Dealer is:



PN: 24559