



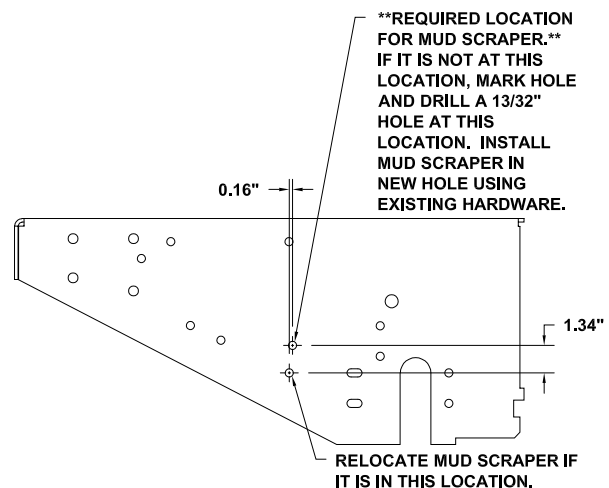
INTRODUCTION: This instruction sheet covers the installation of the Reverse Assist Kit 970245 on the Bunton Gear Drive Midsize models 630022, 630023, 633010 and 634010. This kit provides idler pulleys that tension the slack span of the wheel drive belt when operating in reverse mode. With the transmission shifted into reverse and the traction control levers in neutral, pulling rearward on the reverse assist rods will lock out the brakes and engage the reverse assist idlers. Releasing the rods returns the traction drive back to the normal operating mode.

NOTE: All references to front, rear, left and right are with respect to an operator in the operator's position. All steps will need to be repeated for both the right hand and left hand sides of the machine.

Refer to Figure 1 on Page 2 for Steps 1-9

1. Park machine on a level surface, shut off the engine, remove the ignition key and disconnect spark plug wires.
2. Raise the rear of the machine so drive wheels are off floor. Support rear of machine on jack stands.
3. Disconnect traction idler spring from the idler pin and remove belt cover **A**. Save all parts and fasteners for reinstallation.

4. Loosen nut **B** that retains mud scraper and swing out of pulley groove.
5. Remove and save E-ring and flat washers from axle shaft. Slide wheel assembly outward and set aside for reinstallation.
6. Check the location of mud scraper.
 - If positioned as shown at right, proceed to Step 7.
 - If not, remove mud scraper, drill new 13/32" diameter mounting hole per templates located on Page 6, and relocate mud scraper to new location.



7. Check the brake arm weldment.
 - If "notched" like those supplied in kit, proceed to Step 8.
 - If not, remove and save fasteners, brake band links and adjustment rod. Discard brake arm **I**. Identify LH **15** and RH **26** brake arm weldments from Figure 2 Page 4. The hubs are on the deck side of the arms. Lubricate the pivot shaft and install new arm as shown using existing fasteners, brake band links and adjustment rod. Attach brake band links at the lower hole location in the new arm.
- NOTE:** If adequate adjustment can not be achieved with the brake rod, the links between the brake arm and brake band may be moved to a different hole in the brake arm.
8. Remove belt and wheel drive pulley from transmission shaft by loosening set screw **C**. Be careful not to lose the square keystone.
 9. Remove bolt **D** and nut **E** from front lower corner of the transmission mounting bracket. Discard bolt **D** and save nut **E**.

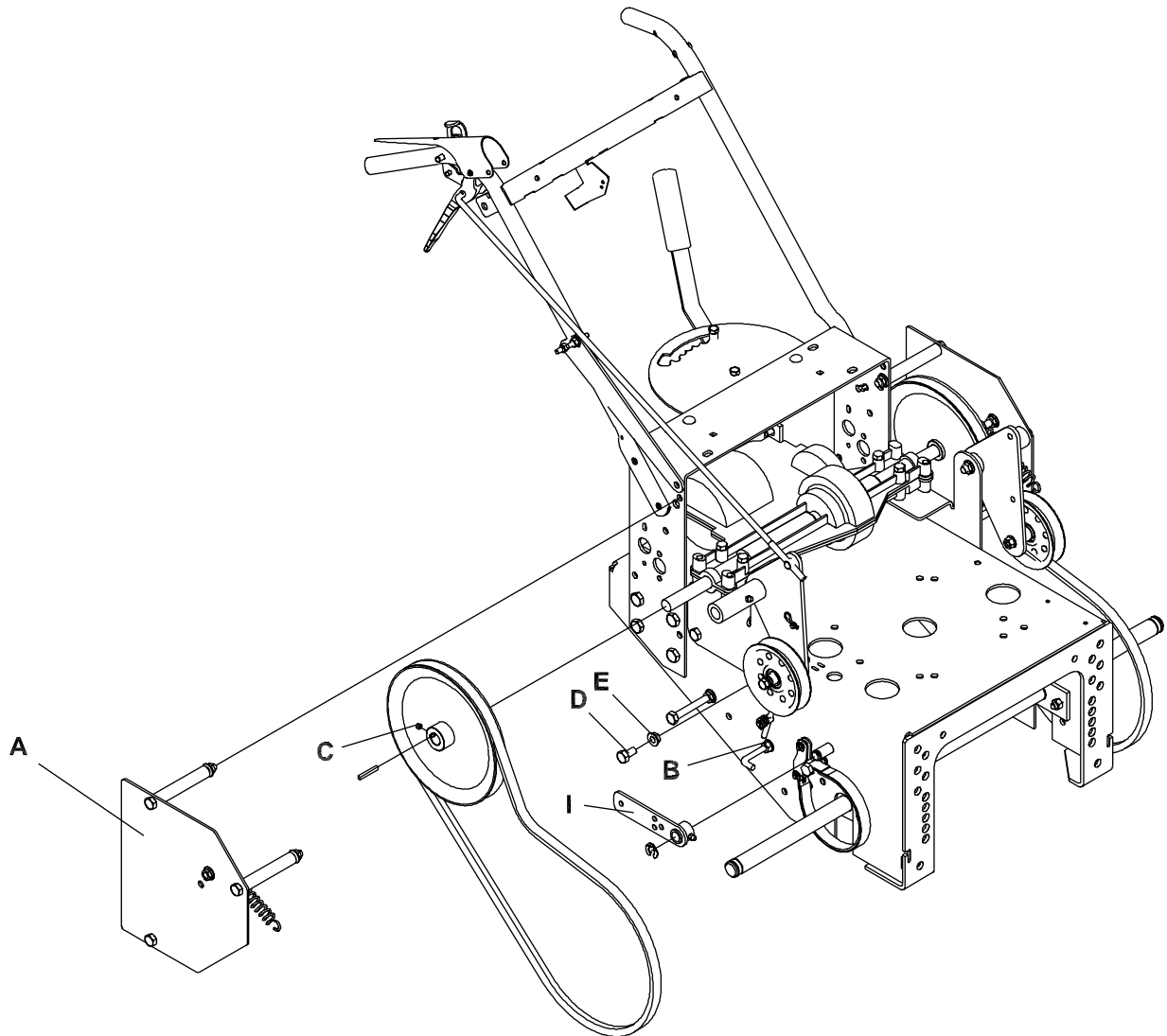


Figure 1



Refer to Figure 2 on Page 4 for Steps 10-20. Corresponding numbers on the parts list located on Page 5 indicate components included in kit.

10. Identify LH **6** and RH **7** latch/lockout assemblies. The screw that retains the plate is away from the engine deck. Apply lubrication to the stepped down surface of the stepped spacer **11**. Slip the latch/lockout assembly onto the stepped spacer (large diameter is adjacent to bracket on engine deck) and mount at the front lower corner of the transmission mounting bracket. Use the included flat washer **29**, M10-1.50 X 40mm metric bolt **23** and nut **E** that was on the bolt previously removed. After assembly **6, 7** must pivot freely.
11. Hook the short end of long spring **3** into the top hole in the latch/lockout assembly **6, 7**. Hook the long end of long spring **3** into upper hole in the reverse assist idler arm **4, 5**. The long spring is routed ABOVE the transmission output shaft. Apply lubrication to arm pivot shaft on reverse assist idler arm **4, 5** and (1) self aligning bearing **12**, (1) spacer **31** and (1) wave washer **30** as shown. Slide this assembly through the support, add another self aligning bearing **12** and secure bearings to support with the included 1/4-20 X 3/4" hex bolts **18** and 1/4-20 flange nuts **19**. Retain reverse assist idler arms **4, 5** in self aligning bearings with 5/8" snap ring **24** provided as shown.
12. Slide drive wheel back into place and reinstall using previously removed flat washers and E-ring.
13. Adjust mud scraper back into pulley groove and tighten nut **B** securely.
14. Remove nuts **F** from U-bolt at upper end of handle brace and mount rod support **9** as shown. When tightening nuts, the rod support should be perpendicular to the reverse assist rod so the rod slides freely in the support bushing.
15. Slide the rod assembly **8** down through the rod support **9** and add (1) 3/8-16 hex nut **16**, (1) swivel **1** and (1) 3/8-16 hex nut **16**. Rod should extend through swivel by 3/4". Install swivel into lower hole of reverse assist idler arm **4, 5** and retain with hairpin cotter **22**. Orient rod as shown and tighten nuts **16** against swivel **1**.

NOTE: Check to make sure there is clearance between the rod end and the transmission drive shaft. Reposition swivel on rod, if necessary to obtain the clearance.
16. Reinstall wheel drive pulley onto transmission shaft. Make sure that it is aligned with pulley on drive wheel assembly. The transmission shaft should stick out approximately 3/4" past the pulley hub. Gap between pulley and reverse assist idler arm is approximately 1/8". Remove setscrew **C** from pulley hub and apply loctite. Reinstall and tighten setscrew **C** securely. Slip the belt back into the pulley grooves.
17. Refer to the spring attachment detail in Figure 2. Install one end of the short spring **2** in bottom hole in latch/lockout assembly **6, 7**. Attach the other end around the lower belt guide bolt **G** on the engine deck by loosening nuts **H**. Position spring on bolt towards the threaded end of the bolt.
18. Reinstall belt cover and idler tension spring **A**. Make sure that the reverse assist idler arm **4, 5** is positioned forward of lower support for the belt cover and that the idler pulley is aligned with the belt.
19. Reconnect the traction control rods. Readjust if necessary.
20. Adjust band brake using brake adjustment rod. Retain with previously removed hairpin cotter.

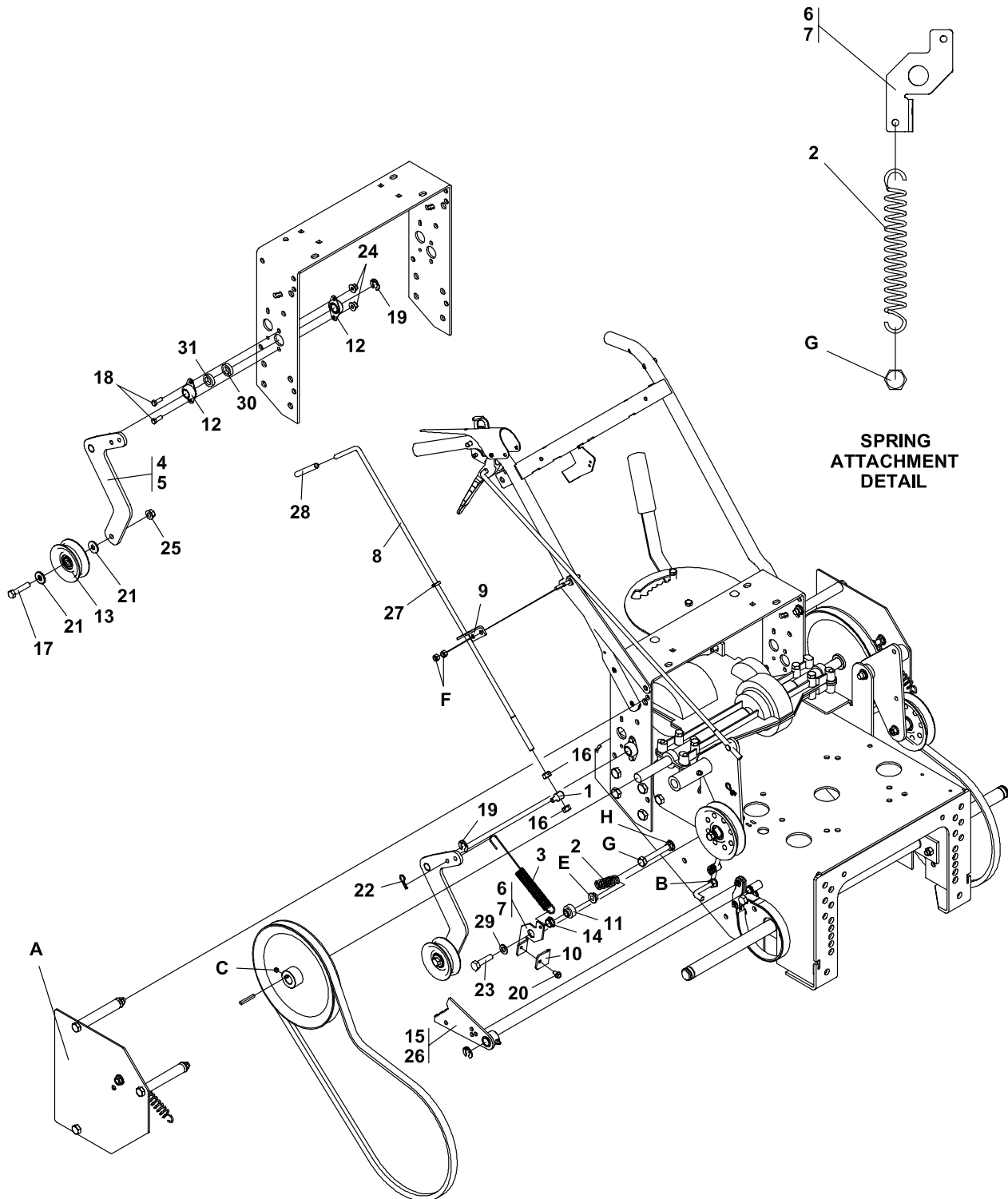


Figure 2

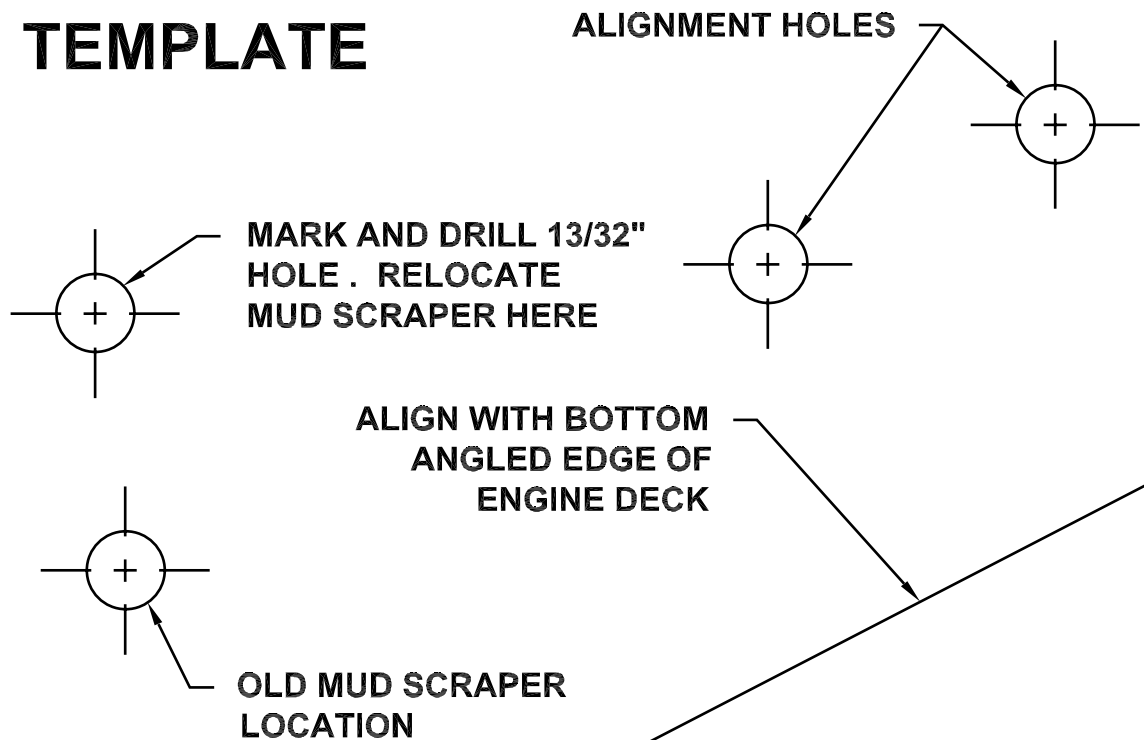


Kit Parts List

ITEM	PART NO.	DESCRIPTION	QTY.
1	33103	SWIVEL	2
2	158139	SPRING-STEER TILT	2
3	4113734	SPRING-EXTENSION	2
4	4113089.7	WLDMT-IDLER ARM LH	1
5	4113090.7	WLDMT-IDLER ARM RH	1
6	4113091.7	LATCH-BRAKE LOCK OUT LH	1
7	4113092.7	LATCH-BRAKE LOCK OUT RH	1
8	4113093	ROD-REVERSE ACTUATOR	2
9	4113094.7	GUIDE-REVERSE ACTUATOR ROD	2
10	4113214	PLATE-BRAKE LOCKOUT	2
11	4113215	SPACER-STEP	2
12	4113282	BEARING-SELF ALGIN .625 ID	4
13	38010-2A	IDLER PULLEY	2
14	38371-02	BRG-NYLINER 5/8	2
15	4113733.7	WLDMT-BRAKE ARM LH	1
16	64025-05	NUT-3/8-16 HEX	4
17	64123-87	BLT-HEX 3/8-16X1-3/4	2
18	64123-89	BOLT-HEX 1/4-20X3/4	4
19	64144-36	SNAP RING.625	2
20	64152-23	1/4-20X3/8 LG SP SCREW	2
21	64163-31	WASHER, 25/64X1X12	4
22	64168-2	COTTER-HAIRPIN.08X1.19	2
23	64205-011	BLT-METRIC M10-1.50X40	2
24	64141-2	NUT-WLF 1/4-20	4
25	64141-4	NUT-WLF 3/8-16	2
26	4113218.7	WLDMT-BRAKE ARM RH	1
27	118047-10	BUSHING-FLIP-LOK .437 ID	2
28	4113760	GRIP	2
29	64251-004	WHSR-M10	2
30	454020	WASHER STYLE 6 ZINC CHROM DIP	2
31	64163-12	.635/.640X1.0X.25 WASH	2



LH TEMPLATE



RH TEMPLATE

