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SECTION 9 - CONTROLS/INDICATORS

TABLE OF CONTENTS

Hand Brake Lever/Master Cylinder Assembly 9-2
Auxiliary Brake Assembly Schematics 9-4
Throttle Control 9-5
Gearshift Pedal (Manual Transmission) 9-6
Drive Selector (300/400 4x4 Models/500) 9-7
Reverse Shift Lever (Manual Transmission) 9-7
Shift Lever (Automatic Transmission) 9-9
Speedometer/Indicator Lights 9-9

Back to Table of Contents

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Hand Brake Lever/ Master Cylinder Assembly

■ **NOTE: The master cylinder is a non-serviceable component; it must be replaced as an assembly.**

REMOVING

1. Slide a piece of flexible tubing over one of the wheel bleeder valves and direct the other end into a container. Remove the reservoir cover; then open the bleeder valve. Allow the brake fluid to drain completely.

AF637D

2. Place an absorbent towel around the connection to absorb brake fluid. Remove the brake hose from the master cylinder.

AF774D

⚠ CAUTION

Brake fluid is highly corrosive. Do not spill brake fluid on any surface of the ATV.

3. Remove the clamp screws securing the brake assembly to the handlebar; then remove the assembly from the handlebar.

AF656D

DISASSEMBLING

1. Remove the lever mounting bolt and lock nut securing the brake lever to the master cylinder.
2. Remove the two screws securing the reservoir to the master cylinder; then remove the reservoir. Account for the gasket, the cover, and the O-ring.

INSPECTING

■ **NOTE: Whenever a part is worn excessively, cracked, or damaged in any way, replacement is necessary.**

1. Inspect the bolt securing the brake lever for wear and for cracked, stretched, or damaged threads.
2. Inspect the O-ring for deterioration and distortion.
3. Inspect the reservoir for cracks and leakage.
4. Inspect the brake hose for cracks and deterioration and the condition of the fittings (threaded and compression).

Back to Table of Contents
Back to Section Table of Contents

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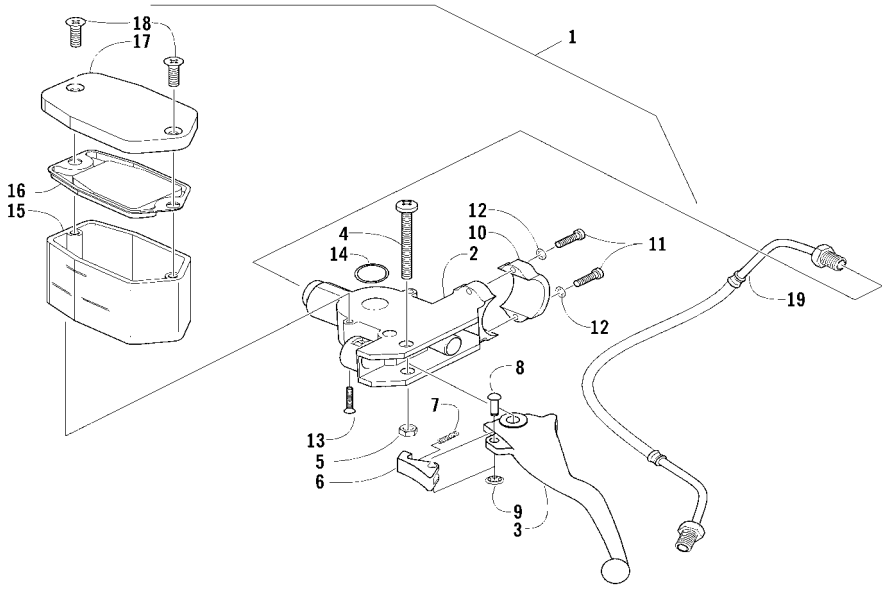
ASSEMBLING

KEY
1. Brake Assy
2. Master Cylinder
3. Brake Lever
4. Screw
5. Lock Nut
6. Brake Lever Lock
7. Spring
8. Pin
9. Nut
10. Clamp
11. Machine Screw
12. Lock Washer
13. Screw
14. O-Ring
15. Reservoir
16. Cover
17. Cover
18. Screw
19. Hose



0737-682

1. Install the O-ring, reservoir, gasket, and cover on the master cylinder. Tighten the two screws to 0.03 kg-m (10 in.-lb).
2. Install the brake lever onto the master cylinder and secure with the lever mounting bolt and new lock nut. Tighten the lock nut just to the point of ensuring free brake lever movement.

⚠ WARNING

Do not over-tighten the lock nut. Over-tightening the lock nut will cause the brake lever to bind. The lever must work freely and fully return to its stop after installation.

⚠ WARNING

A new lock nut must be used to secure the brake lever.

INSTALLING

1. Position the brake assembly on the handlebar. Secure with clamp screws; then tighten securely.

AF656D

2. Install the brake hose on the master cylinder. Tighten to 0.8 kg-m (6 ft-lb).

AF774D

3. Bleed the brake system (see Section 2).

9

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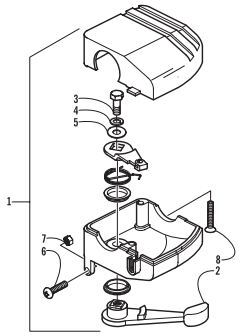
Throttle Control

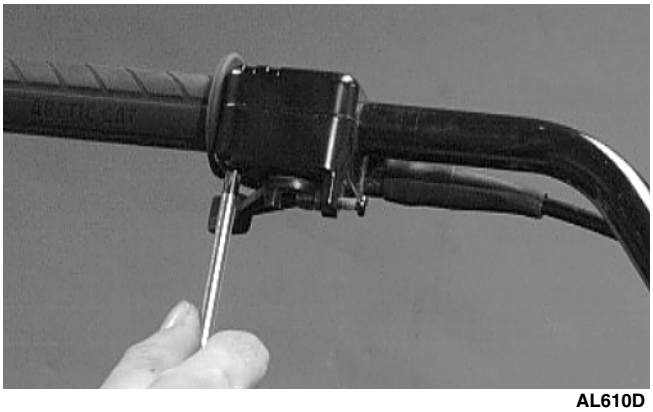
KEY
1. Throttle Case Assy
2. Lever
3. Cap Screw
4. Lock Washer
5. Washer
6. Screw
7. Nut
8. Screw



0737-633

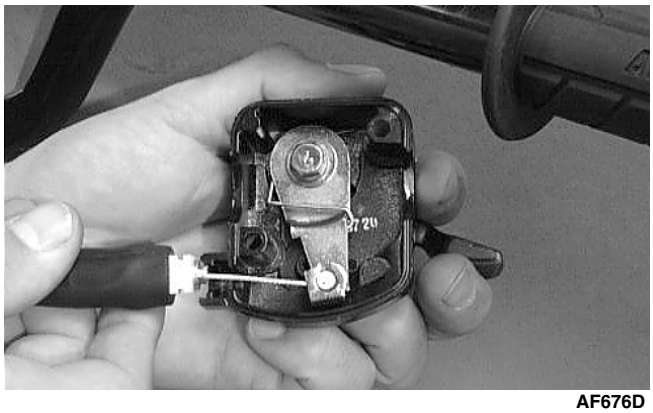
REMOVING

1. Remove the two machine screws securing the throttle control to the handlebar.



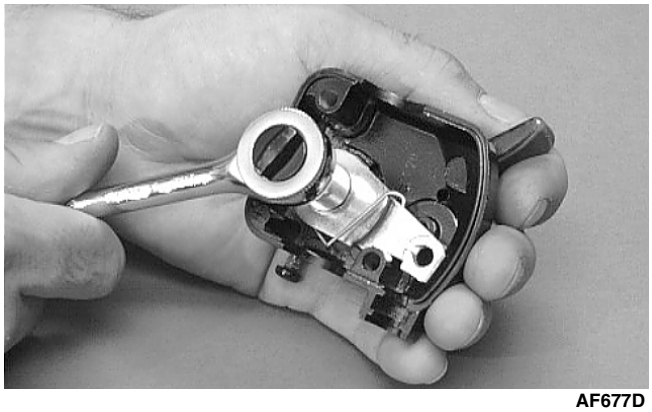
AL610D

2. Slide the grommet out of the lower half of the throttle control; then remove the cable from the actuator arm.



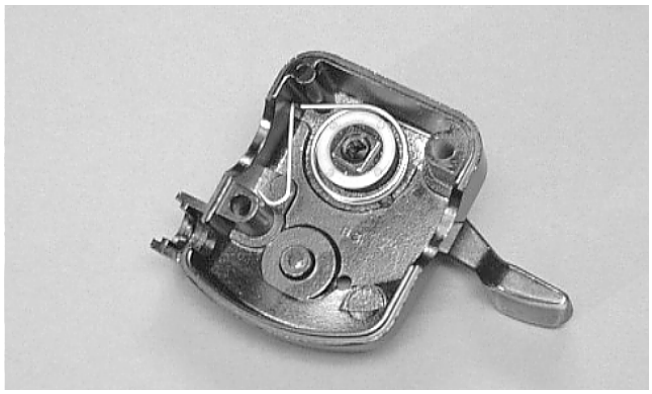
AF676D

3. Remove the cap screw, lock washer, and washer securing the actuator arm to the throttle control lever.



AF677D

4. Remove the actuator arm and account for a bushing. Note the position of the return spring for installing purposes.



AF678D

INSTALLING

1. Place the return spring into the throttle control; then place the bushing and actuator arm into position. Secure with the cap screw, lock washer, and washer.

AF679D

2. Using a pair of needle-nose pliers, place the spring into position on the actuator arm.

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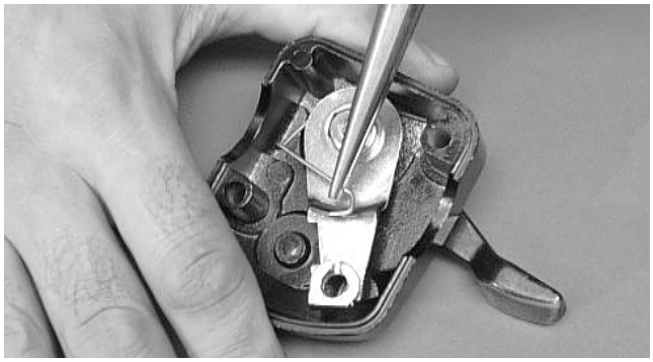
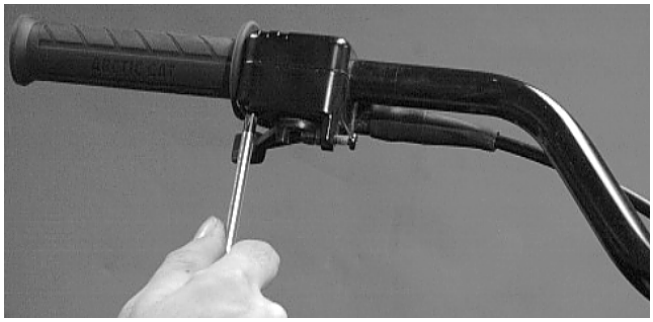


AF680D

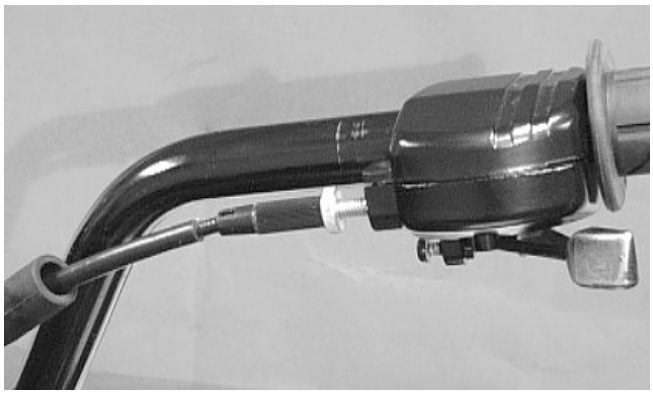
3. Place the two halves of the throttle control onto the handlebars and secure with the two machine screws.



AL610D

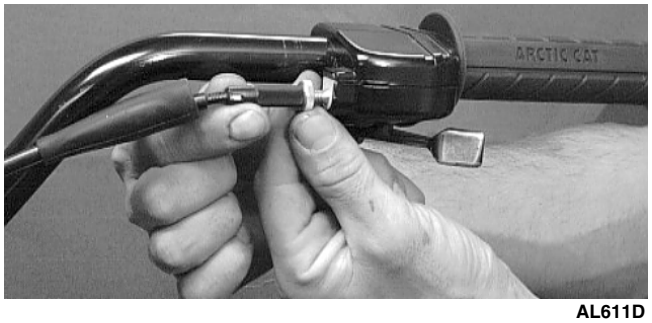
ADJUSTING

1. Slide the boot back to reveal the jam nut; then loosen the jam nut.



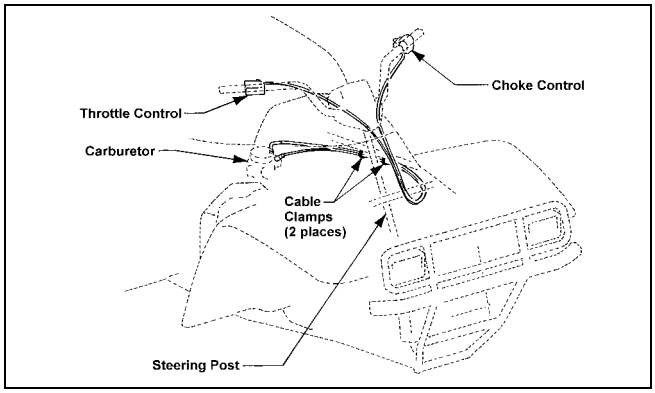
AF682D

2. Rotate the adjuster sleeve until 0.5-1.0 mm (0.02-0.04 in.) is attained.



AL611D

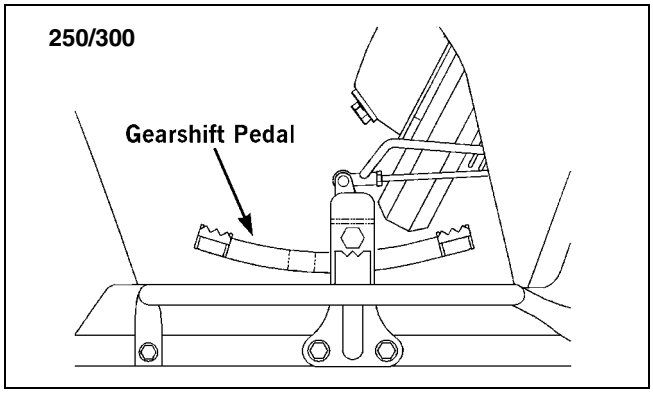
3. Secure the adjustment by tightening the jam nut; then slide the boot over the jam nut.



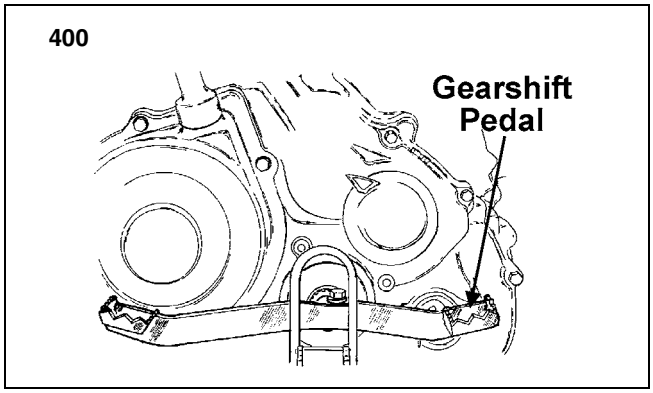
0732-412

Gearshift Pedal
(Manual Transmission)

The gearshift pedal is attached to a ratchet mechanism in the transmission. Each time a gear is selected, the gearshift pedal will return to its normal position ready to select the next gear. To return to neutral, press down repeatedly (once for each gear) on the front of the pedal. Shift into gears by pressing down on the back of the pedal once for each gear. The ratchet mechanism makes it impossible to upshift or downshift more than one gear at a time.



736-567B



ATV0078C

Back to Table of Contents
Back to Section Table of Contents

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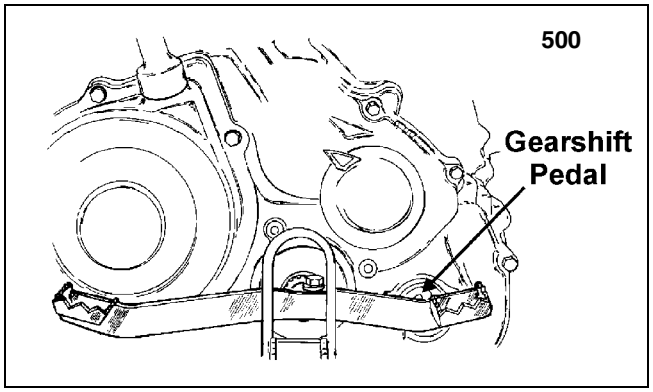
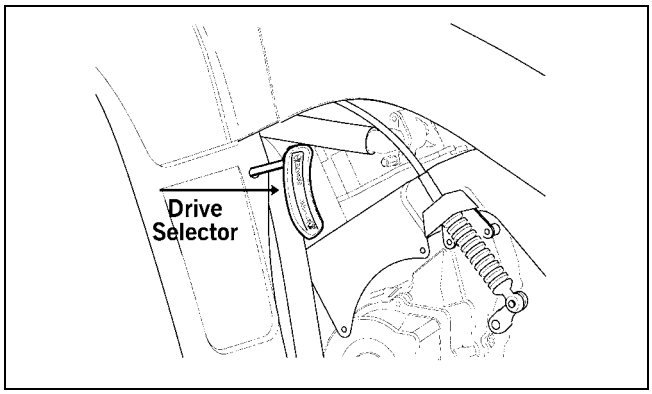


ATV0078B

Drive Selector
(300/400 4x4 Models/500)

The mechanical drive selector allows the operator to operate in either 2-wheel drive (rear wheels) or 4-wheel drive (all wheels). For normal riding on flat, dry, hard surfaces, 2-wheel drive should be sufficient. In situations of aggressive trail conditions, 4-wheel drive would be the desired choice.

To either engage or disengage the front wheels, come to a complete stop; then either push in (to engage) or pull out (to disengage) the front wheel differential. Apply slight throttle until positive engagement of the differential has been observed.



735-508A

⚠ CAUTION

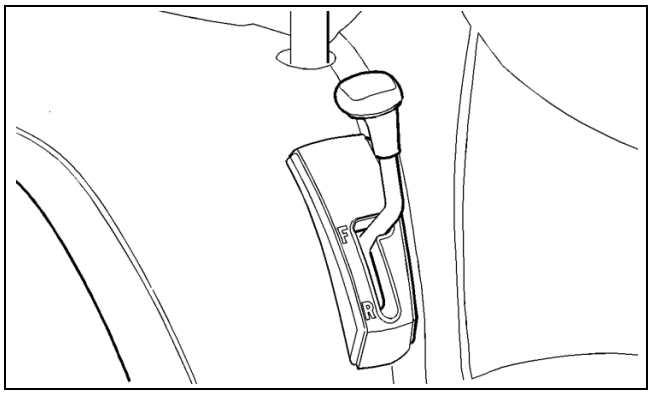
Do not attempt to either engage or disengage the front differential while the ATV is moving.

Reverse Shift Lever
(Manual Transmission)

To shift into reverse gear, stop the ATV completely and shift the transmission into neutral. Pull the reverse shift lever fully rearward to the "R" position. When the ATV is in reverse gear, the gearshift pedal will not function.

⚠ WARNING

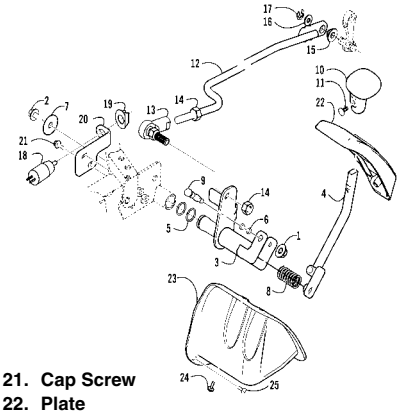
Never shift the ATV into reverse gear when the ATV is moving as it could cause the ATV to stop suddenly throwing the operator from the ATV.



0736-566

KEY

1. Nut
2. Cap Screw
3. Lever Axle
4. Lever
5. O-Ring
6. O-Ring
7. Washer
8. Spring
9. Pivot Axle
10. Handle
11. Clip
12. Linkage
13. Rod End
14. Nut
15. Bushing
16. Washer
17. E-Ring
18. Reverse Switch
19. Retainer
20. Bracket
21. Cap Screw
22. Plate
23. Shield
24. Machine Screw
25. Self-Tapping Screw



0736-908

REMOVING

1. Remove the seat (see Section 8).
2. Remove the gas tank (see Section 4).
3. Remove the three machine screws securing the left-side panel to the frame and rear fender; then remove the left-side panel.
4. Remove the E-clip securing the shift rod to the engine shift arm.

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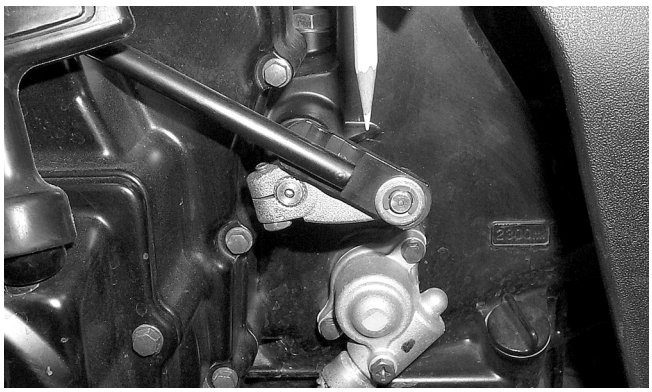


AF942

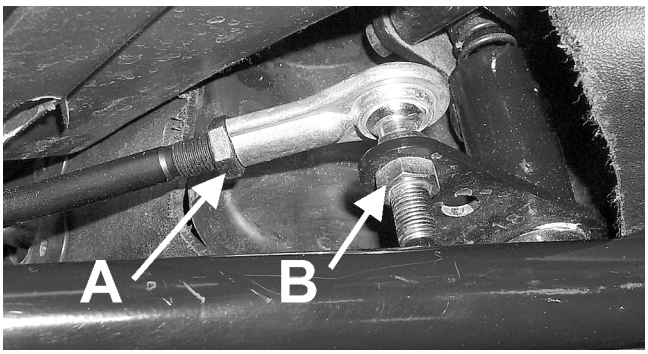
5. Remove the three machine screws securing the gear shift linkage cover to the fender and remove the cover.

■**NOTE: The cover is located inside the left-front wheel well.**

CC851

6. Remove the axle and nut securing the shift lever to the upper shift arm; then remove the shift lever. Account for the spring and two O-rings on the axle.

7. Using two open-end wrenches, remove the lock nut (B) securing the shift rod to the upper shift arm. Remove the shift rod and discard the lock nut.

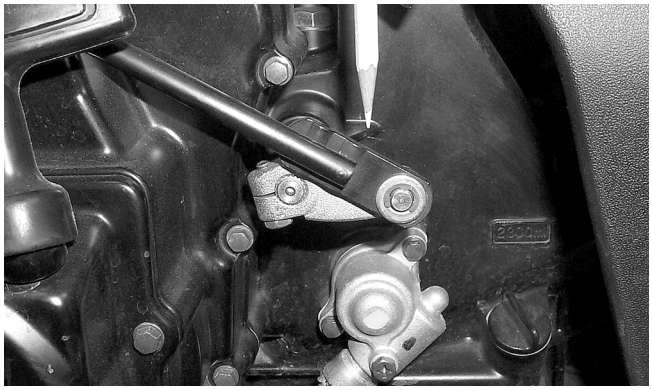


AF941A

■**NOTE: Never reuse a lock nut. Once a lock nut has been removed, it must be replaced with a new lock nut.**

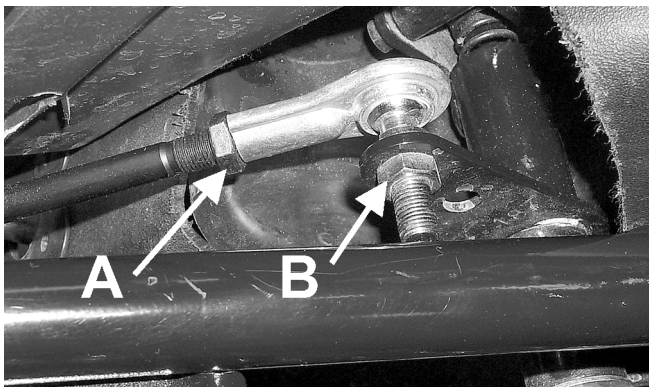
INSTALLING

1. Place the shift rod into position on the engine shift arm and secure with the existing E-clip.



AF942

2. Using a new lock nut, secure the shift rod to the upper shift arm; then using two open-end wrenches, tighten securely.



AF941A

3. Place the spring into position between the upper shift arm and shift lever; then making sure the O-rings are in place on the axle, secure the shift lever to the arm with the existing axle and nut.

4. Install the gas shift linkage cover on the fender in the left-front wheel well. Tighten the three machine screws securely.

5. Place the left-side panel into position on the frame and secure with the three machine screws.

6. Install the gas tank (see Section 4); then install the seat (see Section 8).

7. Check shift lever adjustment (see Section 2).

Back to Table of Contents
Back to Section Table of Contents

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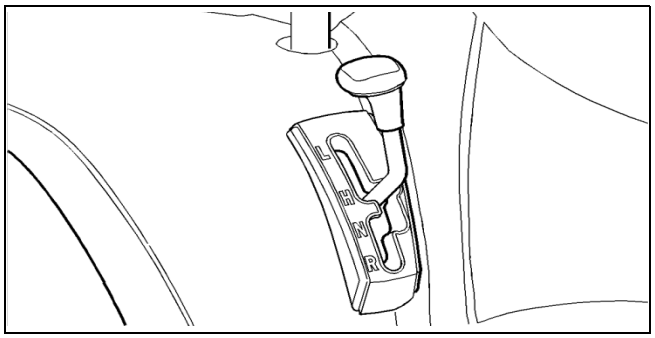
Shift Lever
(Automatic Transmission)

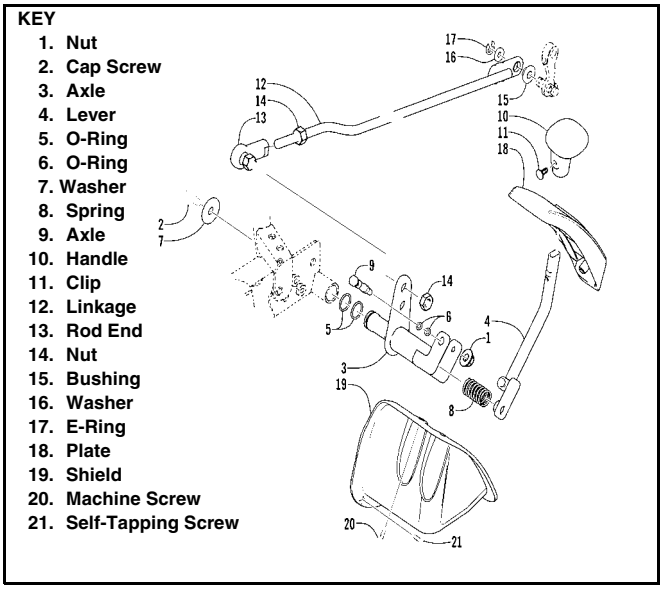
The Arctic Cat ATV with an automatic transmission has a dual-range transmission with reverse. To shift the ATV, follow these steps:

1. To engage the high range from neutral, move the shift lever forward.
2. To engage the low range from high range, move the shift lever outward and forward.



0736-565

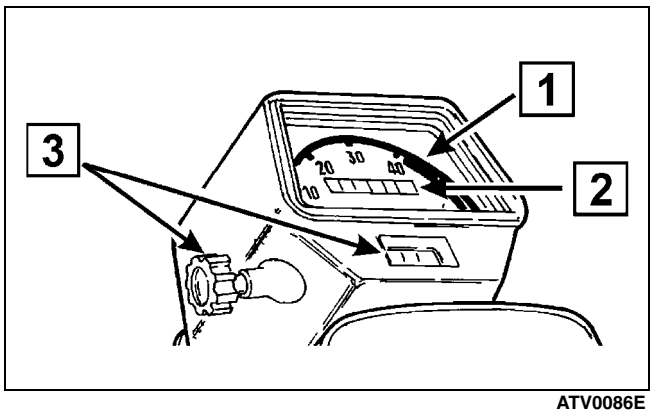
3. To engage reverse gear from neutral, move the shift lever outward and rearward into the R position.



0737-070

Speedometer/Indicator Lights

SPEEDOMETER

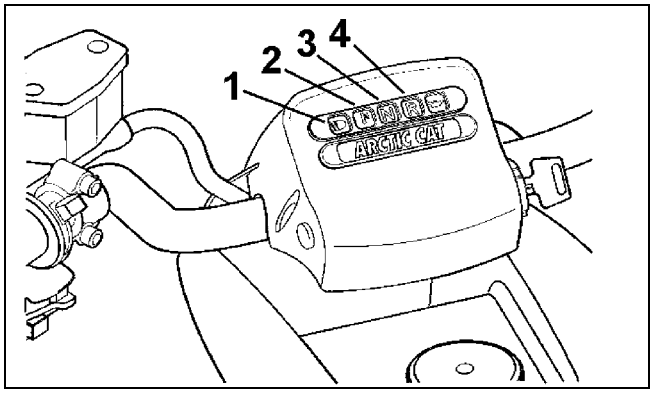


ATV0086E

1. **Speedometer** - The speedometer shows approximate speed.
2. **Odometer** - The odometer shows the total distance traveled.
3. **Trip Meter** - The trip meter is an odometer which can be reset. It can be used to show the distance traveled on short trips or between gas stops. Turning the knob counterclockwise resets the trip meter to zero.

INDICATOR LIGHTS

■ **NOTE: The number and functions of indicator lights will vary from model to model.**



733-707B

1. **High Beam Indicator** - A blue light will illuminate when the lights are on high beam. The light will not be illuminated when the lights are switched to low beam.

9

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2. **Temperature Indicator** - A red light will illuminate if the engine overheats. The light should be off during normal operation.

⚠ CAUTION

Continued operation of the ATV with high engine temperature may result in engine damage or premature wear.

■NOTE: High engine RPM, low vehicle speed, or heavy load can raise engine temperature. Decreasing engine RPM, reducing load, and selecting an appropriate transmission gear can lower the temperature.

■NOTE: Debris in front of the engine (or packed between the cooling fins of the radiator on the 500 or packed between the oil cooler cooling fins on the 250/300/400) can reduce cooling capability. Using a hose, pressure-wash the radiator (on the 500) engine and oil cooler (on the 250/300/400) to remove any debris preventing air flow.

Coolant Temperature Switch	
OFF to ON	115° C (239° F) - Approx
ON to OFF	108° C (226° F) - Approx

3. **Neutral Indicator** - A green light will illuminate when the transmission is in neutral and the ignition switch is on. The light will go out when shifted into any gear other than neutral.

4. **Reverse Indicator** - An orange light will illuminate when the transmission is shifted into reverse gear. The light will go off when shifted out of reverse.

Back to Table of Contents

Back to Section Table of Contents

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