### **Gear Replacement Instructions**

#### Part Number 019612

- 1. Place the antenna in travel position. Remove elevation handle, spring, washer and rotation handle, located in the ceiling inside your vehicle (use a #2 Phillips screw driver to loosen the set screw on the elevation handle.)
- 2. Remove the hex plug from gear housing, located on top of the roof of your vehicle (use a 1" socket).
- 3. Remove capnut and pin from upper arm. Remove worm gear and shaft assembly. Cut the new elevation shaft assembly the same length as the old one.
- 4. Install the new elevation shaft assembly. Push the elevation shaft assembly until reaches the bottom of the hole in the gear housing and the "O" ring is compressed inside the hole.
- 5. Reinstall the hex plug and insure that it is tightened all the way. The hex plug holds the elevation shaft assembly in the proper place.
- 6. Insert new worm gear into upper arm and Instert both into gear housing, then install the pin and capnut.
- 7. Reinstall the rotation handle, washer, spring, elevation handle and tighten the set screw.

OPERATION: Your antenna will function as follows:

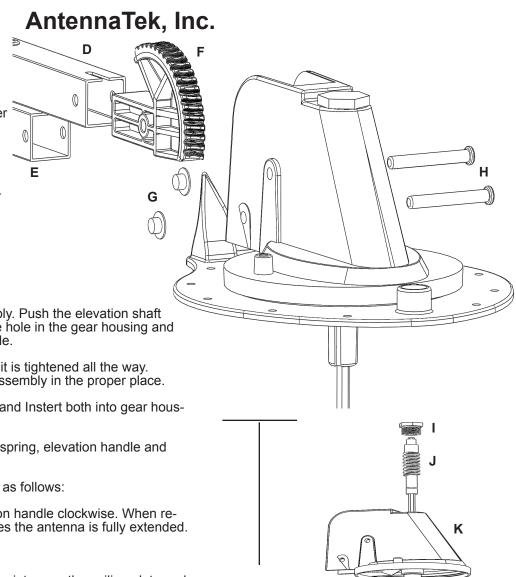
RAISING ANTENNA: Rotate the elevation handle clockwise. When resistance is felt in the handle, this indicates the antenna is fully extended.

### DO NOT APPLY EXCESSIVE FORCE

LOWERING ANTENNA: Insure that the pointers on the ceiling plate and the rotation handle are aligned. Rotate the elevation handle counter-clockwise until you hear the antenna touch the roof (resistance will be felt in the handle).

Warning !!! Lowering the antenna without aligning the pointers, may damage the antenna.

SIMB	DESCRIPTION	P/N
D	Upper Arm	065601
Е	Lower Arm	065602
F	Worm Gear	065645
G	Cap Nut	030260
Н	Clevis Pin 1/4x1.938	065565
I	Hex Plug 7/8 - 14	065614
J	Elev. Shaft Assembly	065641
K	Alum. Gear Housing	065610
L	Large O-Ring	065569
M	Disc Washer	065561
Ν	Alum. Base Plate	065551
Ο	Washer .750IDx.031	065660
Р	Center Lock Nut	065612
Q	Ceiling Plate	065651
R	Rotation Handle	065656
S	Spring	030280
Τ	Washer .755IDx.060	065659
U	Elevation Handle	065542



**Assembly** 

P/N 019726

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# Base Plate and Gear Housing Replacement Instructions

#### Part Number 019726

- 1. Place the antenna in travel position. Remove elevation handle, spring, washer and rotation handle, located in the ceiling inside your vehicle (use a #2 Phillips screw driver to loosen the set screw on the elevation handle.)
- 2. For Mod 400 antennas: Remove the ceiling plate, located on the ceiling of the vehicle, rotate it 180 degress and reinstall it.
- 3. Remove the base plate from the roof of the vehicle by removing the screws and sealant. Clean the roof area of any debris. Place a 1" plumber's putting tape on the bottom of the new base plate, centering it on the holes. Do not leave any gaps. In addition, place the tape around the center hole and the hole for the coax cable. Center the base plate in the hole on the roof. If you are using a roof wedge to level the antenna, you should also place 1" plumber's tape on the bottom of the roof wedge. Using 10 # 8 X 1", (longer if you installed the roof wedge) fully threaded screws, mount the base plate to the roof. Use sealant to seal the screws and the edges of the base plate. Keep the sealant away from the gear housing. Excessive sealant will prevent the gear housing from rotating.
- 4. Insert new worm gear into upper arm and Instert both into gear housing, then install the pin and capnut.
- 5. Reinstall the rotation handle, washer, spring, elevation handle and tighten the set screw.

OPERATION: Your antenna will function as follows:

RAISING ANTENNA: Rotate the elevation handle clockwise. When resistance is felt in the handle, this indicates the antenna is fully extended.

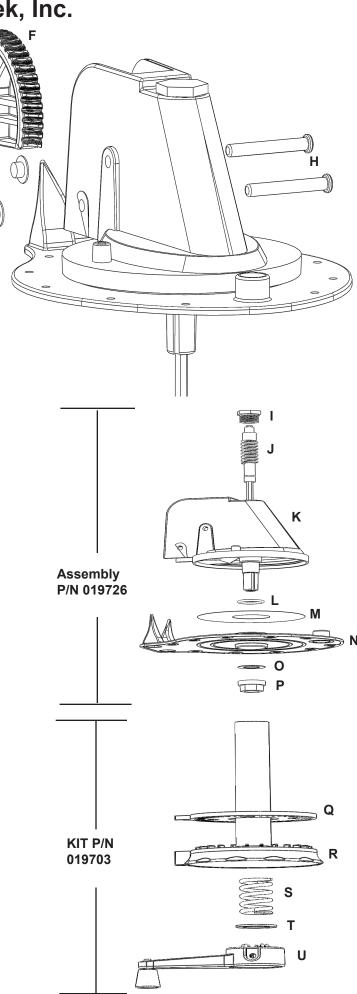
#### DO NOT APPLY EXCESSIVE FORCE

DESCRIPTION

LOWERING ANTENNA: Insure that the pointers on the ceiling plate and the rotation handle are aligned. Rotate the elevation handle counterclockwise until you hear the antenna touch the roof (resistance will be felt in the handle).

D/N

DESCRIPTION	P/N
Upper Arm	065601
Lower Arm	065602
Worm Gear	065645
Cap Nut	030260
Clevis Pin 1/4x1.938	065565
Hex Plug 7/8 - 14	065614
Elev. Shaft Assembly	065641
Alum. Gear Housing	065610
Large O-Ring	065569
Disc Washer	065561
Alum. Base Plate	065551
Washer .750IDx.031	065660
Center Lock Nut	065612
Ceiling Plate	065651
Rotation Handle	065656
Spring	030280
Washer .755IDx.060	065659
Elevation Handle	065542
	Upper Arm Lower Arm Worm Gear Cap Nut Clevis Pin 1/4x1.938 Hex Plug 7/8 - 14 Elev. Shaft Assembly Alum. Gear Housing Large O-Ring Disc Washer Alum. Base Plate Washer .750IDx.031 Center Lock Nut Ceiling Plate Rotation Handle Spring Washer .755IDx.060



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## Gear Housing Replacement Instructions

### Part Number 065610

- 1. Place the antenna in travel position. Remove elevation handle, spring, washer and rotation handle, located in the ceiling inside your vehicle (use a #2 Phillips screw driver to loosen the set screw on the elevation handle.)
- 2. Remove the hex plug from the gear housing, located on the top of the roof of your vehicle (use a 1" socket). Remove the shaft assembly.

3. Using a 15/16" deep socket remove the center lock nut and washer located on the ceiling of your vehicle. Remove the gear housing from the roof of your vehicle.

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4. Remove cap nut and pins to remove the upper and lower arms from the gear housing, then remove the worm gear.

- 5. Place the new gear housing on top of the base plate. Make sure that the large "O" ring and disk washer are in place. From inside the vehicle install the washer and center lock nut using the 15/16" deep socket. The gear housing should be able to turn freely on top of the base plate.
- 6. Insert the shaft assembly into the gear housing and secure in place with the hex plug. Reinstall the lower arm using the pin you removed earlier and a new cap nut. Insert the new worm gear into the upper arm and Instert both into gear housing, then install the pin and cap nut.
- 7. Reinstall the rotation handle, washer, spring, and elevation handle, then tighten the set screw.

OPERATION: Your antenna will function as follows:

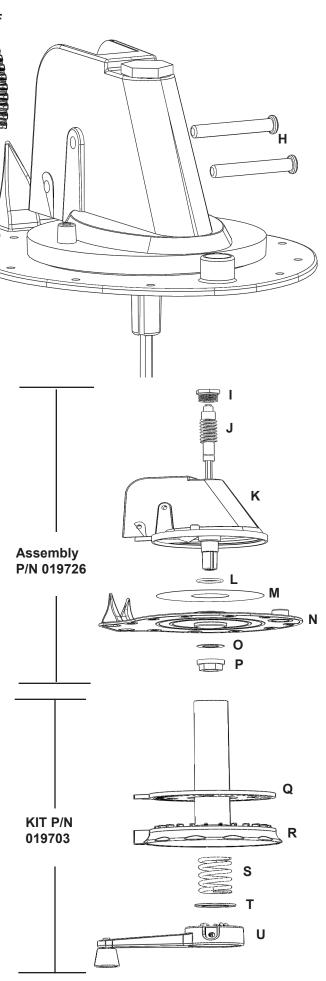
RAISING ANTENNA: Rotate the elevation handle clockwise. When resistance is felt in the handle the antenna is fully extended.

### DO NOT APPLY EXCESSIVE FORCE

DESCRIPTION

LOWERING ANTENNA: Insure that the pointers on the ceiling plate and the rotation handle are aligned. Rotate the elevation handle counterclockwise until you hear the antenna touch the roof (resistance will be felt in the handle).

SIIVID	DESCRIPTION	F/IN
D	Upper Arm	065601
Ε	Lower Arm	065602
F	Worm Gear	065645
G	Cap Nut	030260
Н	Clevis Pin 1/4x1.938	065565
I	Hex Plug 7/8 - 14	065614
J	Elev. Shaft Assembly	065641
K	Alum. Gear Housing	065610
L	Large O-Ring	065569
M	Disc Washer	065561
N	Alum. Base Plate	065551
0	Washer .750IDx.031	065660
Р	Center Lock Nut	065612
Q	Ceiling Plate	065651
R	Rotation Handle	065656
S	Spring	030280
T	Washer .755IDx.060	065659
U	Elevation Handle	065542



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### BASE PLATE REPLACEMENT INSTRUCTIONS

1. Remove elevation handle, spring, washer, and rotation handle, located in the ceiling inside your vehicle (use a #2 Phillips screw driver to loosen the set screw on the elevation handle.)

2. Remove the hex plug from the gear housing, located on top of the roof of your vehicle (use a 1" socket). Remove the shaft assembly. From inside the vehicle, use a 15/16" deep socket to remove the center lock nut and washer. Lift the antenna away from the base plate.

3. Remove the base plate from the roof of the vehicle by removing the screws and sealant. Clear the roof area of any debris. Place a 1" plumber's putting tape on the bottom of the base plate, centering it on the holes. Do not leave any gaps. Additionally place the tape around the center hole and the hole for the coax cable. Center the base plate in the hole on the roof. If you are using a roof wedge to level the antenna, you should also place 1" plumber's tape on the bottom of the roof wedge. Using 10 # 8 X 1", (longer if you installed the roof wedge) fully threaded screws, mount the base plate to the roof. Use sealant to seal the screws and the edges of the base plate. Keep the sealant away from the gear housing. Excessive sealant prevents the gear housing from rotating.

4. Place the gear housing on top of the base plate. Make sure that the large "O" ring and disk washer are in place. From inside the vehicle install the washer and center lock nut. The gear housing should be able to turn freely on top of the base plate. If you tighten the center lock nut too much, you will not be able to rotate the antenna

5. Insert the shaft assembly into the gear housing and secure in place with hex plug. Install the rotation handle, spring, washer, and elevation handle.

OPERATION: Your antenna will function as follows:

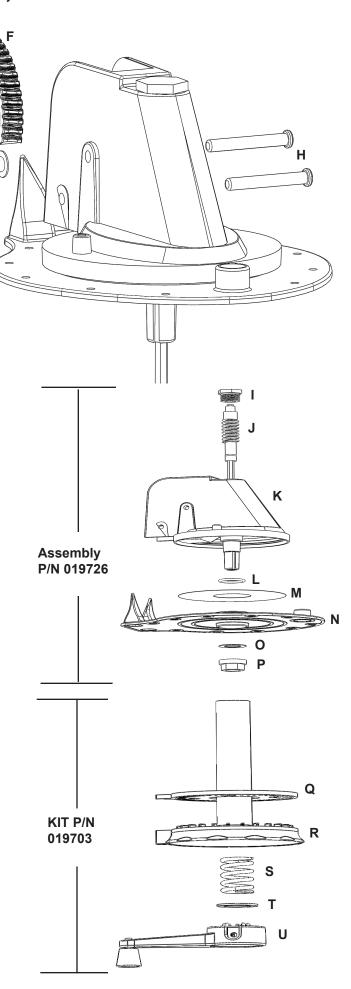
RAISING ANTENNA: Rotate the elevation handle clockwise. When resistance is felt in the handle the antenna is fully extended. DO NOT APPLY EXCESSIVE FORCE

LOWERING ANTENNA: Insure that the pointers on the ceiling plate and the rotation handle are aligned. Rotate the elevation handle counterclockwise until you hear the antenna touch the roof. Resistance will be felt in the handle.

D/N

SIIVIB	DESCRIPTION	P/IN
D	Upper Arm	065601
Е	Lower Arm	065602
F	Worm Gear	065645
G	Cap Nut	030260
Н	Clevis Pin 1/4x1.938	065565
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Q	Ceiling Plate	065651
R	Rotation Handle	065656
S	Spring	030280
Τ	Washer .755IDx.060	065659
U	Elevation Handle	065542

DESCRIPTION



POWER SUPPLY REPLACEMENT INSTRUCTIONS P/N 065840, 065841, 065843 & 065845

Step 1: The power supply is designed for installation in any standard electrical box. To mount the power supply cut a hole in the wall and install the electrical box. Place the power supply switch in the "OFF" position. Run two wires # 14 AWG from a 12 Volt DC power source in the vehicle to the rear of the power supply. Insure that the 12 Volt DC power source current is limited to 7.5A. Strip the wires and crimp the guick disconnects onto the wires, then push the wires onto the tabs on the circuit board (see power supply illustration for correct polarity). Place switch in the "ON" position and check that the red LED illuminates. When the LED illuminates the polarity is correct. Place switch in the "OFF" position to avoid any short circuits while making cable connections.

**CAUTION:** The red wire is positive (+) The white wire is negative (-)

Step 2: Connect the coaxial cable from the antenna to the connector marked "Antenna" on the rear of the power supply.

Step 3: To connect the second power supply available as an optional accessory, run two # 14 AWG wires from a 7.5A limited 12 Volt DC power source and connect them to the rear of the power supply. Insulate the DC connections with wire nuts and insulating tape. Attach a coax cable from the second TV to the connector marked 2nd TV in the rear of the power supply.

Step 4: Place the power supply inside the electrical box and mount the flush with 2 # 6x3/4" flat head screws. Attach the coaxial cable to the front of the power supply and connect to the main television set. Place Switch in the ON position.

