

Returns

Anyone wishing to return merchandise must obtain authorization to do so. The date of purchase must be given and the merchandise must be returned with freight being prepaid.

- 1.) Warranty period begins on date of purchase.
- 2.) Please call to obtain return authorization.
- 3.) When the item is received, our engineering department will inspect & advise customer service of their findings. At that time, a customer service representative will contact you with a written or verbal report.
- 4.) This warranty does not cover damage resulting from tamper, abuse, unreasonable use, mistreatment, negligence, accidental breakage or any aircraft cables, safety cables & wires.
- 5.) shipping charges are to be prepaid.

Lifetime Guarantee

N.S.A. RV Products, Inc. warrants to the original owner of this product that it will be free from defects in material and workmanship with a lifetime guarantee on the Ready Brake unit and the towbar. The lifetime guarantee does not cover any hardware, cables or any component of the in-dash light monitoring system.

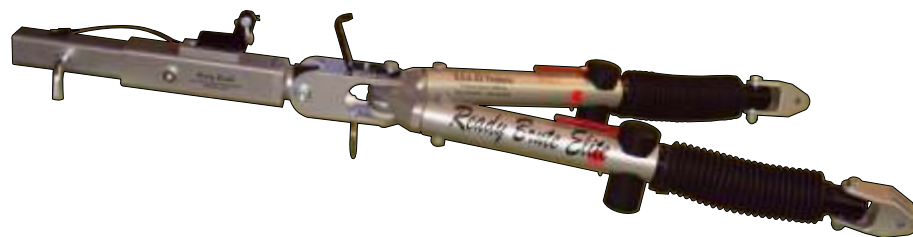
IN NO EVENT WILL N.S.A. RV PRODUCTS, INC. BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGE, RESULTING DIRECTLY FROM POSSESSION, MISUSE OR IMPROPER CARE OF THE READY BRAKE & Ready Brute UNIT.

Important : Coverage & Performance under the foregoing lifetime guarantee is conditional upon the first retail purchaser.

N.S.A RV PRODUCTS, INC. 129 ½ N. KENTUCKY, IOLA, KS. 66749
PH: 620-365-7714 Toll Free: 800-933-3372 FAX: 620-365-7797



Ready Brute Elite
Towbar & Brake Combo



Installation Instructions



Before you get started

To ensure that you get optimum results from your Ready Brute Elite please read through the instructions. The Ready Brute Elite provides the towing and braking assistance you need for your towed vehicle, but only when it is used according to the manufacturer's instructions. **NOTE the following:**

Base plates need to be installed on your towed vehicle prior to installing the Ready Brute Elite.

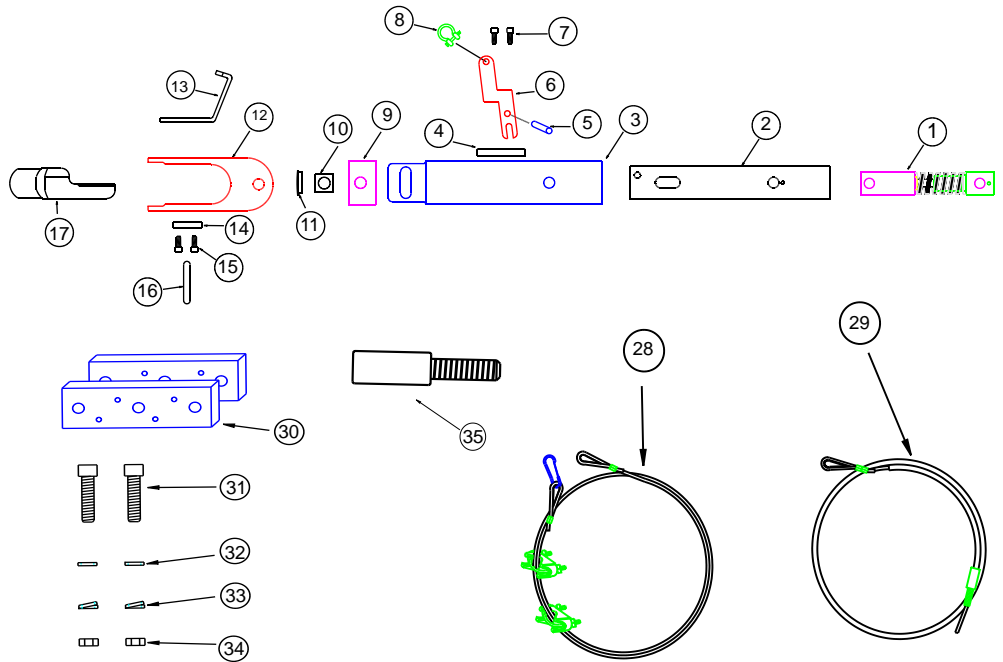
N.S.A. Ready Brute Elite Towbars are rated for 8,000 lb. towing capacity. Be sure that the towed vehicle mounting brackets, safety chains and hitch are also rated for more than the weight of vehicle to be towed. (Tow car base plates are not included.)

Installing your Ready Brake

Make sure your receiver on motor home is clean and free from debris. Then place the Ready Brake into the receiver tube. Align the holes of the Ready Brake and your hitch's receiver tube. Use a standard 5/8" cross pin to secure the Ready Brake in the receiver. The actuator arm on the Ready Brake can travel 3 1/2" toward the bumper on the motor home. Allow for clearance. Most motor homes have a standard 6" deep receiver but some are shorter. In case of a shorter depth it is ok to cut 1" off the end of the 2" square tube of the Ready Brake to allow it to fit a shorter receiver.

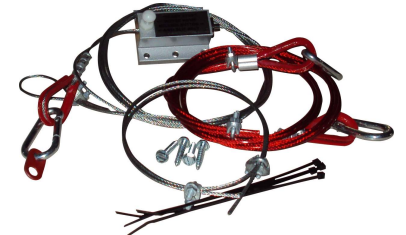
Step 1. Drill a hole in the firewall where the internal cable conduit will be attached. Depress the brake pedal and mark a spot, with chalk, on the firewall directly across from the depressed brake arm, allowing for a straight pull between the brake pedal arm and the hole. (See Fig. B)

Step 2. Make sure there is no obstruction on the engine side of the firewall. Pull back the carpet and drill a 1/8" pilot hole, allowing your drill bit to barely go through the firewall. If anything is interfering with this location, drill another pilot hole. Remember to maintain as straight a line as possible.



Available Accessories

Break-Away System
applies towed vehicles
brake's if it ever break's away
from motorhome
RS-5000



5 Styles of drops

2" drop # H-702

6" drop #H-706

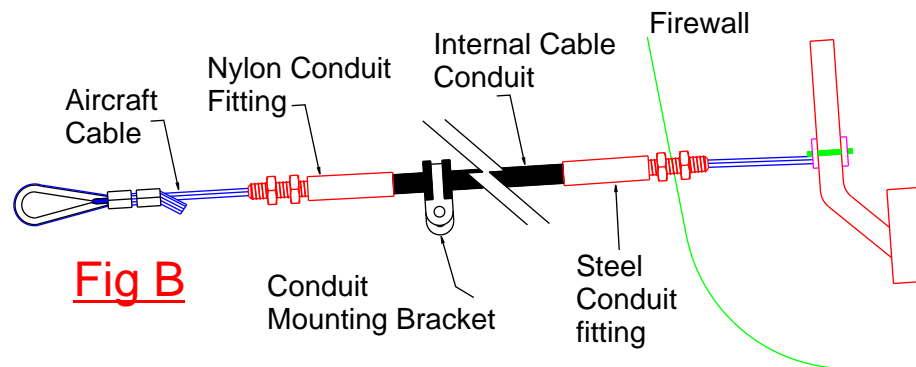
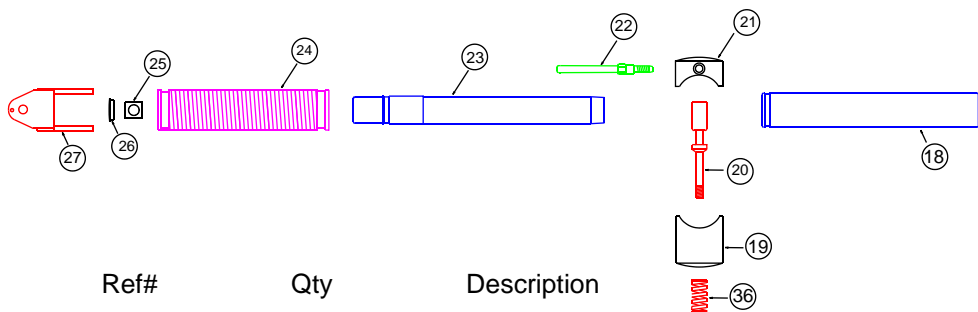
10" drop #H-710

4" drop # H-704

8" drop # H-708

extension # H-1800





Ref#	Qty	Description
1	1	Shock & Spring Assembly
2	1	Brake Body Inside
3	1	Combo Head
4	1	Pivot Block Clamp
5	1	3/8x1" Dowel Pin
6	4	1/4-20x1" Socket Head Cap Screw
7	1	Actuator Arm
8	1	Actuator Arm Clevis
9	1	Dust Cover
10	1	Clevis Bearing
11	1	Swivel End Cap
12	1	U-Joint
13	1	Stow Strap
14	1	Ring Support Block
15	2	5/8-1/4X20" SHCS
16	1	O-Ring
17	2	Billet Elbow
18	2	SL-OT
19	2	Covers
20	2	SL-Pin
21	2	SL-Cam
22	2	SL- Handle
23	2	SL-IT
24	2	Dust Cover
25	2	Clevis Bearing
26	2	Leg End Cap
27	2	Towbar to Baseplate Clevis
28	1	Sling
29	1	Cable Conduit & S.S. Cable W. Thimble
30	1	Brake Tie
31	2	1/4-20x2 1/4" SHCS
32	2	Washer
33	2	Split Washer
34	2	Nut
35	1	Nylon Fitting
36	1	3/8" Spring

Step 3. Install the Ready Brake conduit fitting. When you have no obstructions in the firewall, enlarge the hole for the steel conduit fitting using a 5/16" bit. Cut a small slit in the carpet where the hole is and slide the steel conduit fitting through the hole from the engine side of the firewall. Secure the steel conduit fitting with the nuts and washers provided. This should protrude through the firewall as little as possible into the car. (see Fig B)

Note: If the area where you have drilled the hole for the black cable conduit is congested, put a small dab of silicone (RTV) between the nut and the washer to keep the parts from falling off during installation.

Step 4 At the front (near center) of your towed vehicle, select a location for securing the front end of the Ready Brake black internal cable conduit with the provided nylon fitting. In order to alleviate any slippage of the black conduit, we have added a white nylon fitting to be placed at the front of the towed vehicle.

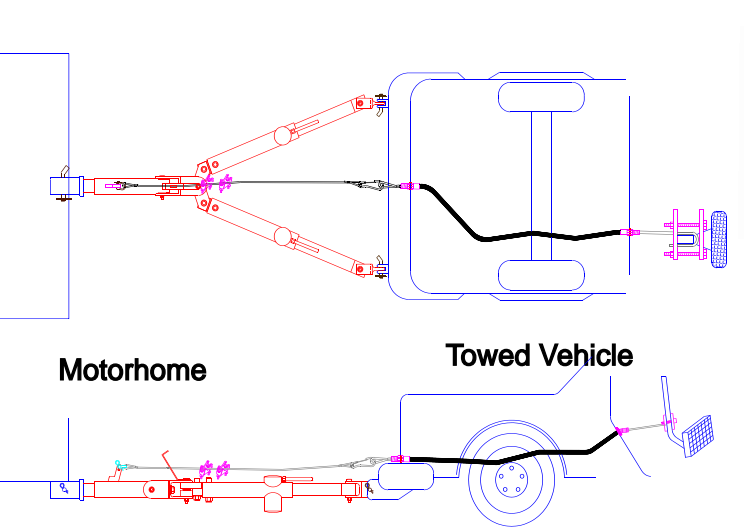
- If the fitting can be mounted by pushing it through a 3/8" drilled hole in the bumper, baseplate mount or cross member use the nylon nut that is supplied to hold the fitting in place. (see Ex. #1 pg. 4) Or the fitting may be mounted using the clamp provided by placing the clamp around the threaded part of the fitting and bolting to flat surface of bumper, cross member or baseplate bracket (as shown in Ex. #2, page 4).
- Cut the black conduit approximately 3/4" short of the place that you have selected to connect it at the front of the towed vehicle. (A cut-off wheel, like a Dremel tool works well with this.)

- C. Run about 12" of aircraft cable through the nylon fitting and into the black conduit to get started. (If you don't get it started in this manner it will be difficult to put it through the nylon fitting once the fitting is on the conduit.)
- D. Push the nylon fitting over the cut end of the black conduit, then thread the cable through the black conduit.

Step 5. Attaching the aircraft cable to your towed vehicle's brake pedal.

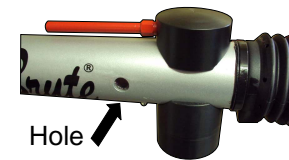
- A. Place the black brake tie on the bottom of the brake pedal arm. Thread the aircraft cable through the small hole of the bottom piece of the brake tie. Loop it around the brake pedal arm then back through the second small hole on the right. (See Fig C)
- B. Put the top piece of the brake tie on the front of the brake arm.
- C. Using the 1/4" x 2 1/4" bolts, nuts and lock washers lock the brake tie tightly around the brake pedal arm (see Fig C). Keep in mind if you are working on a vehicle with adjustable pedals to place pedals in highest position. Always tow with pedals in the highest position.
- D. Trim excess aircraft cable from the bottom of the brake tie.

Note: The brake tie and cap screws provided fit the brake arm on most vehicles. (You may need a longer bolt), If you experience any difficulty, please call N.S.A. at 1-800-933-3372

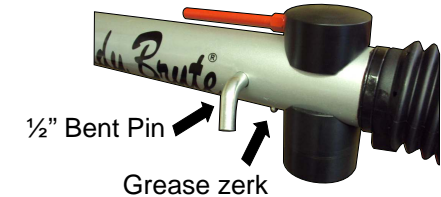


New Update to the Ready Brute Tow Bars

Ready Brute tow bars now include a new feature which will help out in case of failure of any leg component. We have added a hole in which a 1/2" bent pin (not included) can be inserted in case of an emergency situation. It's not a permanent fix-it's just to get you to a safe place so you can assess the situation and make real repairs. To do this just peel the clear and red stickers off and insert the 1/2" bent pin with the tow bar legs fully extended out the pin will not fit in unless the leg is fully extended out.



Hole



1/2" Bent Pin

Grease zerk

2nd Update

We also added a new grease zerk so you can grease the tow bar leg and keep it lubricated. It is located in front of the black spring cover on the bottom. Lubricate this with the tow bar leg extended out so the grease will completely lubricate all of the leg. This does not need to be done very often about twice a year depending on how much you tow.

Installation Instructions Of Clevis To a Ready Brute Tow Bar



After taking the tow bar out of the box you will see the end of the legs have no clevises to hook to any brand of baseplates. You will need to install the clevises you have ordered.



With a 5/16" allen wrench and a 3/4" wrench, take the 5/8" shoulder bolt out of the tow bar leg. When pulling the 5/8" bolt out do not allow the internal knuckle to slide up into the tow bar leg. If it does you will have to pick the tow bar up and shake it back out. Slide the clevis onto the tow bar leg and reinsert the 5/8" shoulder bolt through the leg and the internal knuckle.



(Example #1)



(Example #2)



Put the 1/2-13" nylock nut on the bottom of the 5/8 shoulder bolt. Tighten the nut with the allen wrench and the 3/4" wrench until the nut squeezes the ends of the clevis. Do not tighten this so tight that the clevis can't pivot back and forth, tighten so the nylon in the nylock nut is past the threads.

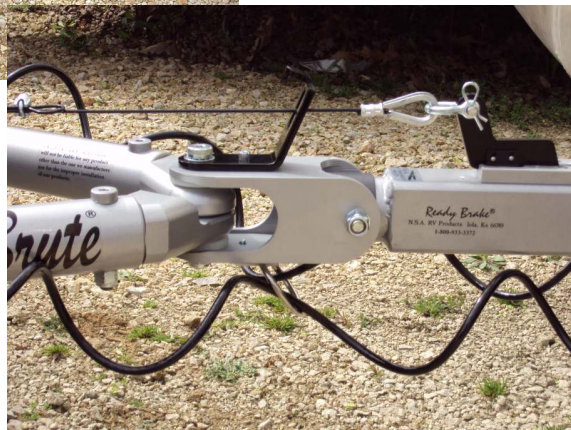
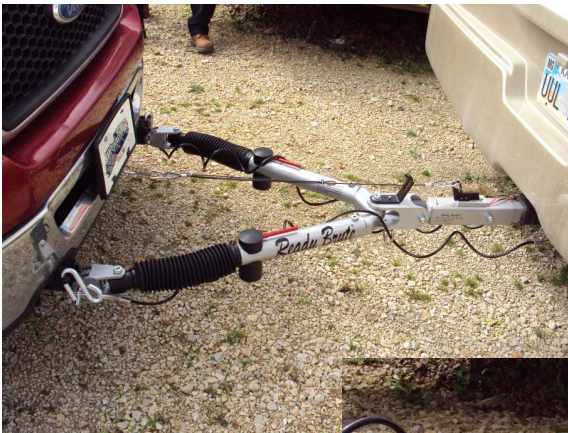


Now do this process for the other leg and you are ready to tow.

SAFETY CABLE INSTALLATION:

SAFETY CABLES MUST CONNECT THE TOWING VEHICLE TO THE TOWED VEHICLE FRAME TO FRAME. DO NOT USE DAMAGED CABLES!

1. Using the cable hooks, attach the cables to a solid part of the chassis of the towed vehicle.
2. Wrap each cable once around their respective towbar leg and run the cable through the chrome ring under the swivel part of the U-Joint.
(see bottom of this page)
3. Using the cable hooks, attach the opposite ends of the cables to a solid part of the RV's chassis. The preferred method of your safety cables would be to criss cross them. For example: Left side of car to right side of RV.
4. When attaching the safety cables it is important to allow enough slack for towbar & towed vehicle's turning radius. It is equally important that the safety cables not be allowed to drag or touch the ground. If this happens, the cables may become damaged and ineffective.
5. Be sure each cable used has the proper length and load rating for the towbar being used.



****Please Note:** Some vehicles have double-wall or uni-body frame boxes at the point you need to run conduit through the floorboard (Ford-Windstar, Honda-CRV, Etc.). If so, you may be able to go 2-3" in either direction and find only one thickness of floorboard. The easiest way to hook the brake pedal to the aircraft cable is to remove the brake pedal pad (rubber part) and drill a small hole for the cable to go through. Drill a second hole near the brake arm. Pull the cable from the firewall through the hole of the pedal and go across the face of the pedal and push it back through the pedal. Hook to the arm as described in step 1. Then replace pedal pad.

Adjusting The Ready Brake

Step 1. Prepare your motor home and towed vehicle for towing.

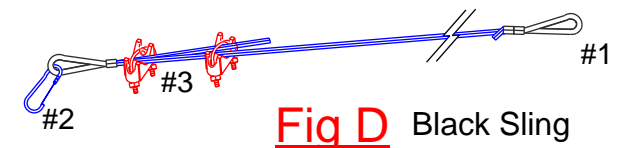
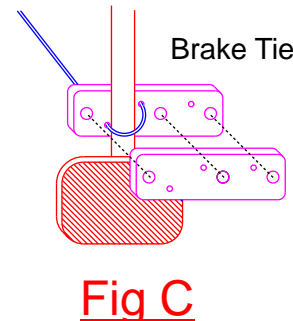
- A. Hook the tow vehicle to the motor home as normal. Make sure the vehicles are aligned straight (IMPORTANT) And the tow bar, chains, lights, etc... are connected properly.

Step 2. Make sure your towed vehicle's brakes are in an idle position.

Do not apply pressure to the towed vehicle's brake pedal when you are adjusting the aircraft cable sling that drapes across the tow bar.

- B. Fig D #1 side attaches to the black actuator arm on the Ready Brake. #2 attaches to the loop sticking out of the front bumper. Keep in mind this sling moves so do not allow #3 to come in contact with the tow bar black stow strap Fig #13 on page #11

- C. Using a 8mm hex wrench, tighten the two nuts on the cable clamp so that the wire sling length is no longer adjustable. Make sure one clamp is up against the aluminum sleeve and against thimble on one end.



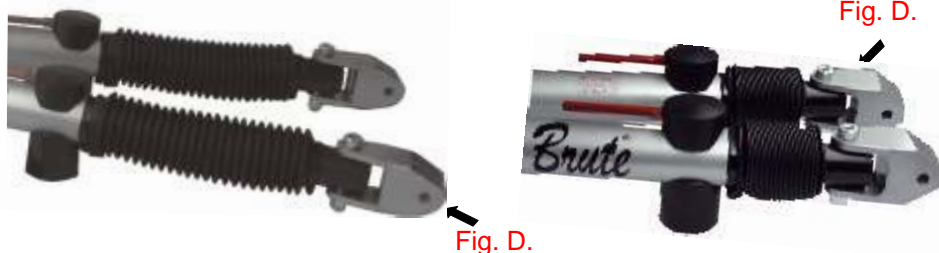
- D. A good way to check your adjustment is to pick up on the cable at the center and see how far it will raise before movement can be seen on the car's side of the cable. There should be about 2"- 3" movement, no more.
- E. After the cable clamp has been tightened, make sure that towed vehicle's brake lights remain off. If the lights are lit, loosen the cable clamp and slacken the cable, again tighten the cable clamp and check the towed vehicle's brake lights. When the adjustment is completed, the brake lights will remain off.
Note: some brake light switches are very sensitive.
- F. The black conduit, when properly installed, should work easily, the cable should go in and out when the brake pedal is stepped on.
- G. If desired, put a bungee cord from the brake pedal to the seat frame when towing. This will allow for added return pull on the cable.

Installing Ready Brute Towbar

1. Place the Ready Brake portion into the receiver tube on the RV and secure it with a standard 5/8" cross pin. The drawbar is designed to fit in a 6" depth receiver. If yours is 5" it is ok to cut off 1" of the 2" tube of drawbar.
2. The actuator arm on the Ready Brake can travel 3 1/2" towards the bumper on the RV, allow for clearance.

3. Hooking to towed vehicle's baseplate

- A. Move legs of towbar out and down in a V position with legs not extended.
- B. Pull car close enough to hook tow bar to baseplate.
- C. Take the clevis (Fig D) and pull it out and hook it directly up to the baseplate of the towed vehicle then place the bent pin and hair pin cotter into the clevis.
- D. Repeat this procedure on the other towbar leg.
- E. Then make sure handles are parallel to towbar leg. Pull forward in RV to extend and lock legs in the travel position.
- F. Always rotate handle so it's in line with the towbar arm when snapping into holes. If not, damage may result causing harmful effects to towbar arms. If only one pin drops into place, drive motor home forward slowly and turn in direction of pin that needs to fall. (Example- Right pin needs to fall-turn right).



- G. Always make sure the arms are extended out for towing. Fig. F
- H. After the leg pins are down you can hook up the aircraft cable for the Ready Brake do not do this until the pins are down and locked in.



UNHOOKING AND FOLDING

1. Park the RV with vehicle in tow, in a straight line on a flat, level surface to ensure minimum pressure is extended on the towbar arms. This will aid in the removal of the 1/2" bent pins. Engage the towing vehicle's parking brake. Place the towed vehicle either in park for automatic transmission or securely in first gear for manual transmission. Unhook safety cables and lighting.
2. Towbar --Rotate the twist cam handles 90° to relieve any pressure on the towbar. Next remove pins from the baseplate on the towed vehicle. Now collapse the legs then rotate handles back straight with the legs. Repeat this procedure for the other towbar leg.
3. To stow towbar tilt towbar up and hook the clevis around the stow strap then tilt arms to either side for storage. (See fig. G)
4. Keep the tow bar covered when not in use. NSA- Ready Brute tow bar cover is recommended. This will cut down on the dirt build up on the tow bar. It will also keep the sunlight off the boots.



(Note) If RV is to be driven with towbar in stow position NSA recommends wrapping legs with bungee strap, and hooking leg ends to RV bumper to hold Ready Brute in place over rough roads.

IMPORTANT: DO NOT TOW IF TOWBAR IS OVER 2 INCHES OFF LEVEL IN EITHER DIRECTION. IF THE TOWBAR IS MORE THAN 2 INCHES OFF LEVEL WE SUGGEST USING A DROP / OR RISER TO BRING IT LEVEL.