Sprite/Midget Tube Shock Conversion Kit
P/N C-GSA200 Installation Instructions

Introduction

Read these instructions thoroughly and check and identify all parts provided before starting your installation. The general arrangement of the installation is shown in Figure 1.

This kit contains the parts and instructions necessary to install tube shocks, which are not included and must be ordered separately.

This conversion was designed for use with wheels having a 3.75" back-space (the distance between the inner rim edge and the wheel mounting flange). Wheels having less backspace than this must use spacers to obtain clearance for the shocks.

Important:

1) The kit also requires you to retain your existing stock lever-arm shocks. If the lever arm bushings of your existing shocks are worn, resulting in play in the lever arm, you must have your shocks rebuilt before proceeding. The tube shock kit cannot control camber or castor, and badly worn lever-arm shocks will lead to severe tire wear and unpredictable handling.

2) These instructions were prepared assuming the use of later model lower control arms ("pans" or "wishbones") having anti-sway bar pickup points in place. Very early cars not having these provision will require additional reinforcement work. We recommend that you upgrade to the later arms as they are already reinforced and drilled for sway bar mounting.

3) The kit is compatible with lowered front suspensions, but only with those using no more than 1/2" spring pan spacers, since longer spacers place the pan in a position that prevents installation of the lower brackets.

4) To determine if adequate wheel clearance exists, ensure that the wheels are steering straight ahead, and measure the distance between the inside surface of the tire at the centerline and the surface of the inner fender (see Figure 3).

5) Do this at front and rear of the tire and average the measurements. The average measurement must be equal to, or greater than, 6-3/16". If your measurement is less than this, subtract your measurement from 6-3/16". The difference is the minimum thickness of the wheel spacer you must use when using this kit.

6) If you have determined that you need a spacer, you must then measure the length of the wheel stud exposed past the wheel flange. Remove a lug nut and measure the length of the stud standing proud of the surface on which the nut bears. Subtract 1/8". If the result is less than the thickness of the spacer required, you will need to install longer wheel studs.

Installation: Lower Control Arm

1) Remove the three bolts attaching the Anti-roll Bar (A.R.B.) mounting bracket to the lower control arm. Attach the 8S1003 or 8S1004 Lower Shock Bracket to the control arm using the three long and three short 5/16" aircraft bolts, nuts and washers as shown in Figure 2. A template is provided in Figure 4. Refer also to Figure 5 for mounting. Secure the shock end of the bracket with a single washer between the bracket and the lower arm. Use as many washers as required at the ARB end to leave a gap no more than 1/32" before tightening the bolts. We suggest gluing or taping the spacing washers to the outer faces of the bracket to ease assembly.

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Installation: Upper Mount

1) Drill a 1/4" diameter pilot hole through the lower edge of the wheel arch assembly at the location shown in Figure 1. Use this hole to temporarily attach the 8S1001 or 8S1002 Upper Shock Bracket using a 1/4" diameter aircraft bolt, nut and washer.

2) Align the bracket parallel with the forward face of the footwell box and clamp the bracket to the wheel arch. Using the bracket as a template, drill four additional 1/4" holes through the wheel arch. Remove the bracket, deburr the holes and paint or otherwise protect the area against corrosion. Install the bracket using the five aircraft bolts, nuts and washers as shown in Figure 3. NOTE the use of additional washers at the lower two holes. Refer to Figure 6.

Completion

1) Loosely attach the shock to the upper and lower brackets with the 3/8" hardware provided and as shown in Figure 4. Do not fully tighten fasteners.

2) Leaving the car on the stands, install the wheels and move from lock to lock, observing the motion of brake hoses and adjusting their position as needed by bending mounting brackets and/or rotating hoses with respect to the brackets. Bend hard lines as required, being careful not to kink them. When a satisfactory position is found, tighten any loosened fasteners.

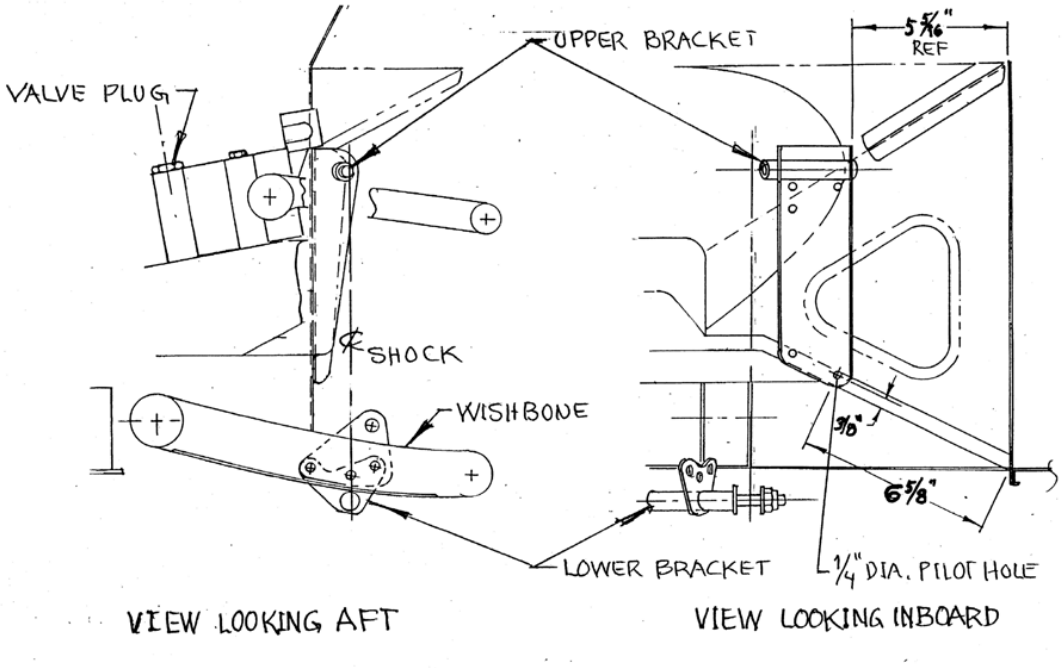
3) Unscrew the large hex-head plug from the shock body and remove the needle valve and spring on both sides. Reinstall the plugs. **Important!!** *Make sure that shock fluid levels are topped up!* The upper arm still needs lubrication even though it no longer functions as a shock!!

4) Lower the car to the ground and tighten the wheel nuts. Tighten the upper and lower shock mounting bolts and check all other fasteners and tighten as required.

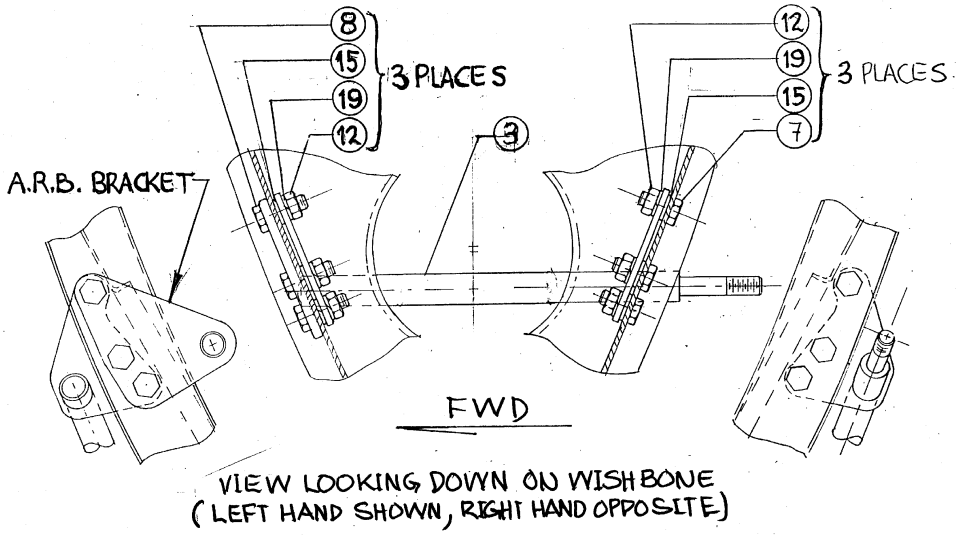
6) Check brakes for proper operation and bleed if necessary.

Parts List

Item #	Part No	Description	Qty./kit
1	8S1001	Shock Bracket, Upper, LH	1
2	8S1002	Shock Bracket, Upper, RH	1
3	8S1003	Shock Bracket, Lower, LH	1
4	8S1004	Shock Bracket, Lower, LH	1
5	C543	Plug, 3/8" hole	2
6	AN4-6A	Bolt, Aircraft, 1/4-28 x .31"	10
7	AN5-6A	Bolt, Aircraft, 5/16-24 x .31"	6
8	AN5-7A	Bolt, Aircraft, 5/16-24 x .44"	6
10	HF0640	Bolt, 3/8-24 x 5.0", gr5	2
11	NP1041	Nut, 1/4-28, gr5	10
12	NP1051	Nut, 5/16-24, gr5	12
14	NL1061	Nyloc nut, 5/16-24, gr5	4
15	AN960-516	A/C washer, 5/16"	18
16	WS3041	SAE Washer, 1/4"	4
17	WU6051	USS Washer, 5/16" (3/8"id)	8
18	WL2041	Lockwasher, 1/4"	10
19	WL2051	Lockwasher, 5/16"	12
20	AN960-516L	A/C Washer, 5/16" thin	6



General Arrangement
(Left hand shown, Right hand opposite)
Figure 1



Lower Bracket Attachment
Figure 2

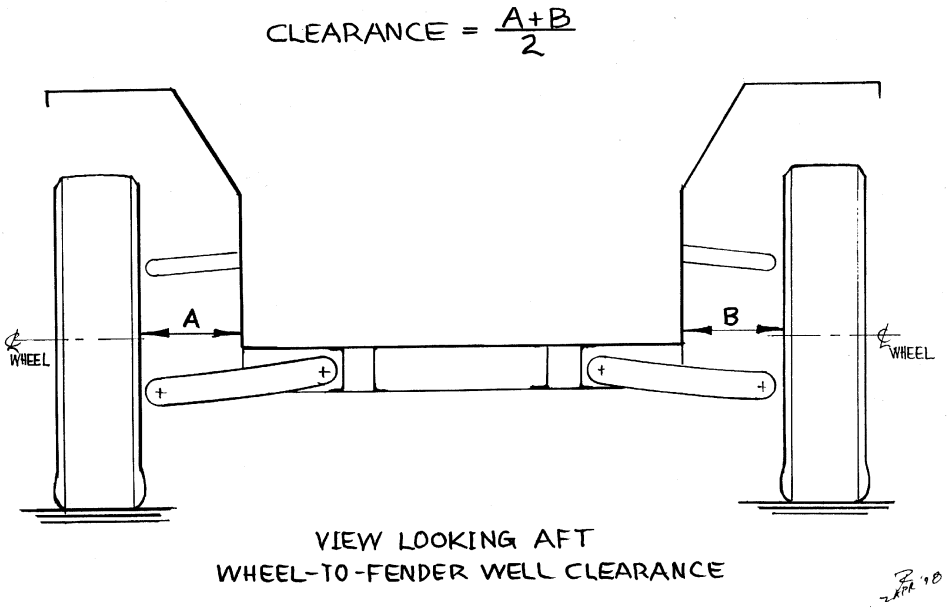
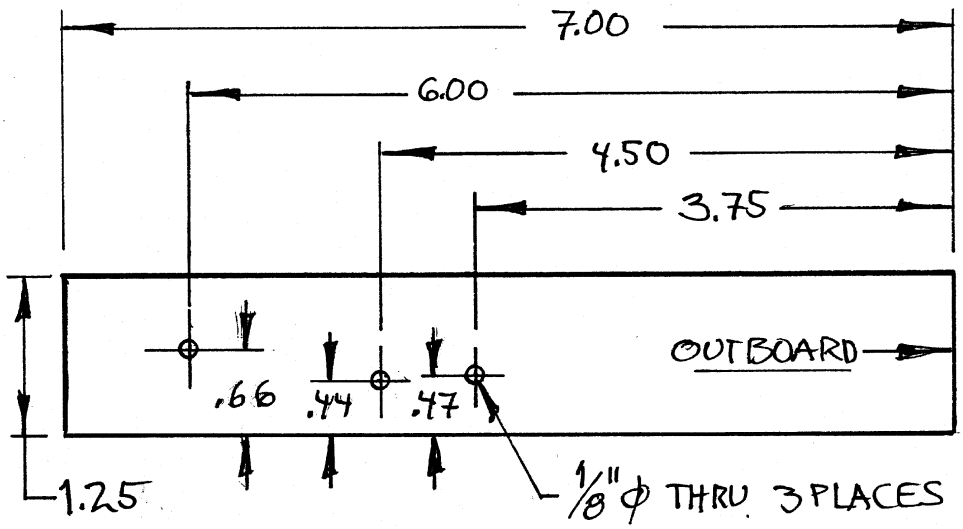
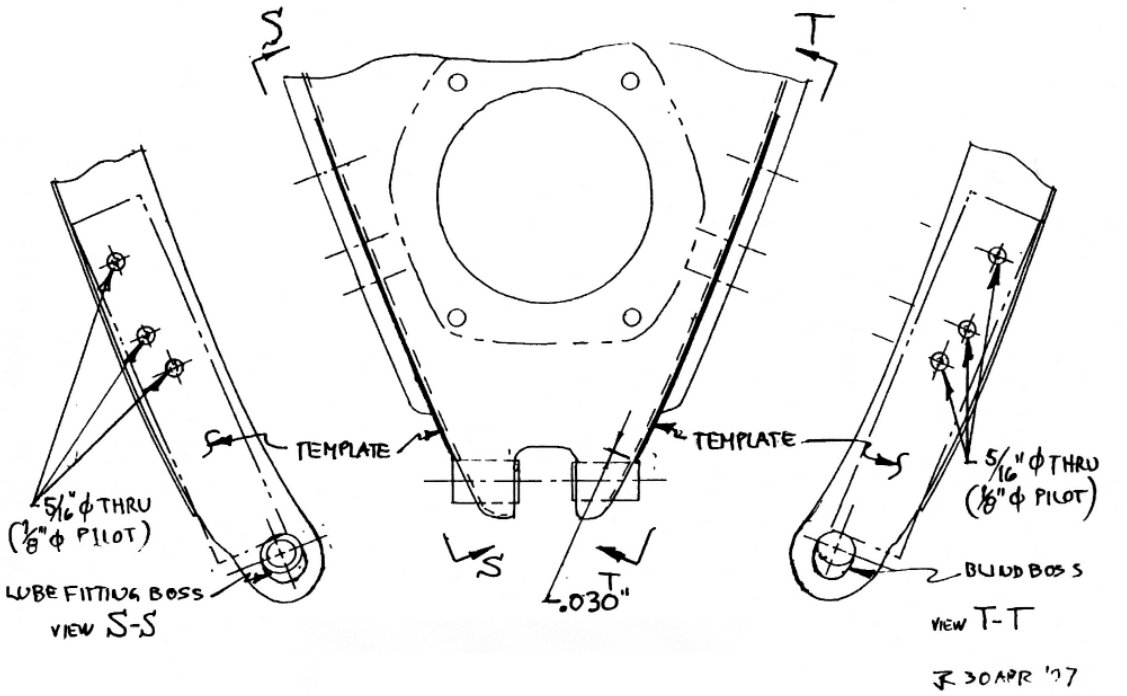


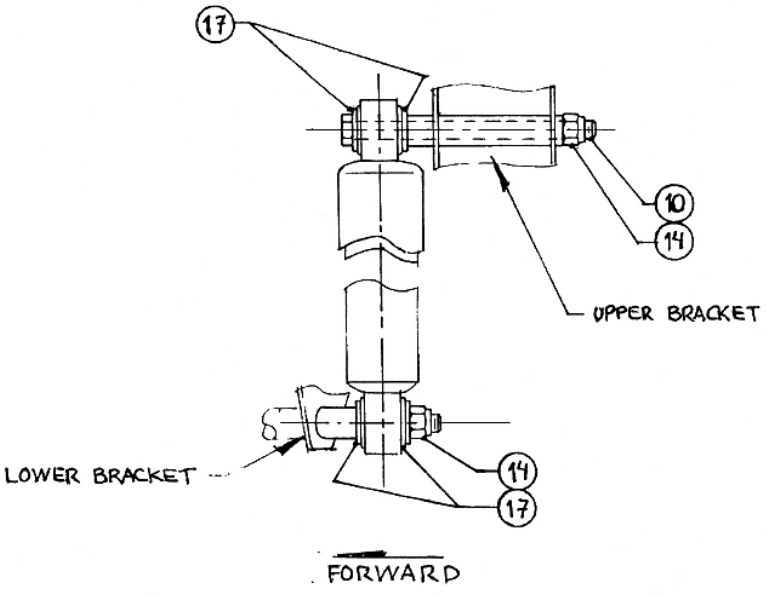
Figure 3



ARB Mount Hole Template
Figure 4



View Looking Down at Wishbone
ARB Mount Holes
Figure 5



Shock Attachment
Figure 6