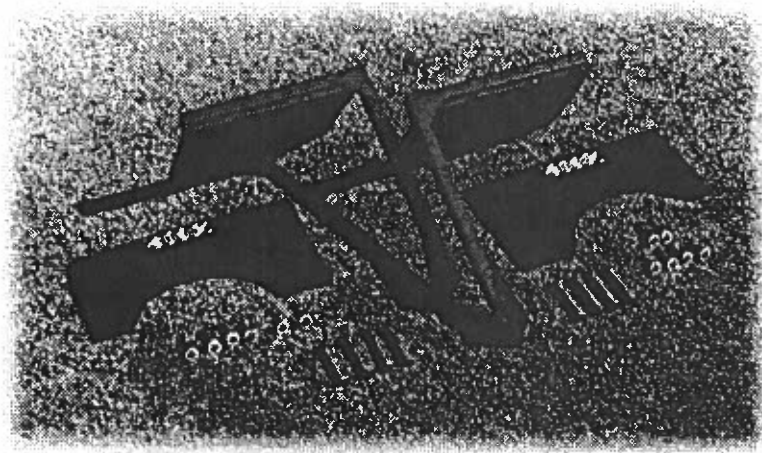


**Aero Twin, Inc. Main Gear Gravel Deflectors,  
P/N GD5-100  
for  
Cessna Model 180**

**INSTALLATION INSTRUCTIONS**



LOG OF REVISIONS			
REVISIONS		PAGES REVISED AND DESCRIPTION OF REVISIONS	AERO TWIN SIGNATURE
NO.	DATE		
--	4/20/90	Original Issue	--
A	7/4/97	Revised per ECO AT-40, Format revised, All pages revised.	Michael Lovett
B	11/12/12	Revised pages 2-4 per ECO AT-150.	<i>Jason Hylph</i>

## **Aero Twin, Inc. Main Gear Gravel Deflectors P/N GD5-100**

### **1.0 Installation**

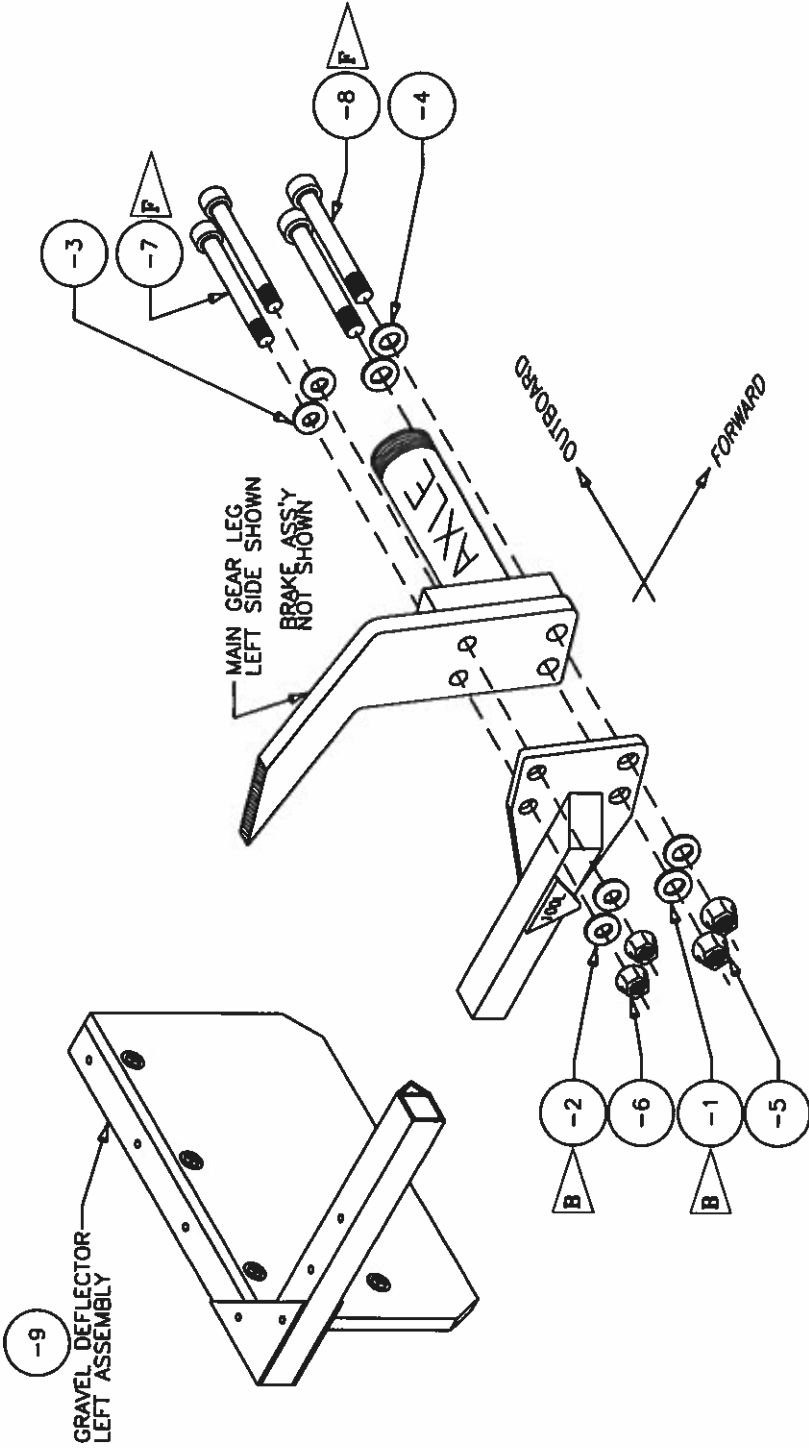
**NOTE: This kit is not to be used with installed speed fairings or other accessories mounted to the main gear.**

1. Remove the left main gear wheel and axle per the FAA approved maintenance manual. Ensure that the axle alignment shims can be reinstalled in the same pattern as were originally installed.
2. Attach the left gravel deflector (GD5-101-L) as shown on drawing GD5/6-I-1, Sheet 1, using the new hardware supplied with the kit. Torque the axle attach nuts per the FAA Approved Maintenance Manual.
3. To install the tire scraper, fit it snug against the tire, on top of the installed gravel deflector, as shown on drawing GD-I-2, Sheet 1. Match drill the fastener holes through the bottom of the frame and then through the rubber tire scraper.
4. Trim the overhanging tire scraper rubber flush with the outside edge of the frame, as shown in drawing GD-I-2, Sheet 1.
5. Attach the "NO STEP" placard on the top side of the rubber tire scraper as shown on drawing GD-I-2, Sheet 1.
6. Install the right Gravel Deflector (GD5-101-R) following the same procedure, (steps 1-5).
7. Execute FAA form 337 in duplicate, stating that this gravel deflector kit was installed in accordance with this STC. The total change in airplane empty weight and balance is 8.5 lb. at fuselage station 27.0.

## 2.0 Parts List

Qty	Part Number	Item Description
1	GD5-209-L	Left Gravel Deflector Assembly
1	GD5-209-R	Right Gravel Deflector Assembly
2	GD-102	Rubber Tire Scraper
12	NAS1149F0632P	Washer
12	NAS1149F0532P	Washer
4	MS20002C6	Washer
4	MS20002C5	Washer
4	NAS145-40 OR MS20005-31	Bolt
4	NAS146-45 OR MS20006-34	Bolt (180 to 180E Models Only)
4	NAS146-41 OR MS20006-30	Bolt (180F Models Only)
4	MS21042-L6	Nut
4	MS21042-L5	Nut
14	MS21042-L3	Nut
14	A3235-028-935 OR FW235-28	Washer
4	MS24694-S68	Screw
10	MS24694-S64	Screw
14	NAS1149F0332P	Washer
2	GD-NSP	Placard
4	MS20470A4-9	Rivet
4	NAS1149FN432P	Washer

-----END-----



**NOTE:**

- ▲ REMOVE WHEEL ASSEMBLY PER FAA APPROVED MAINTENANCE MANUAL.
- ▶ INSTALL GRAVEL DEFLECTOR AS SHOWN; USE UP TO (3) WASHERS ON EACH BOLT AS REQUIRED FOR CORRECT THREAD EXPOSURE.
- ▶ REINSTALL NUTS AND TORQUE PER FAA APPROVED MAINTENANCE MANUAL.
- ▶ INSTALL WHEEL ASSEMBLY PER FAA APPROVED MAINTENANCE MANUAL.
- ▶ USE P/N GD5-209-L FOR C180/185 AND P/N GD6-209-L FOR C205/206 AND C182. (RIGHT-HAND OPPOSITE)
- ▶ REFER TO BOLT SCHEDULE FOR PROPER BOLT APPLICATION.

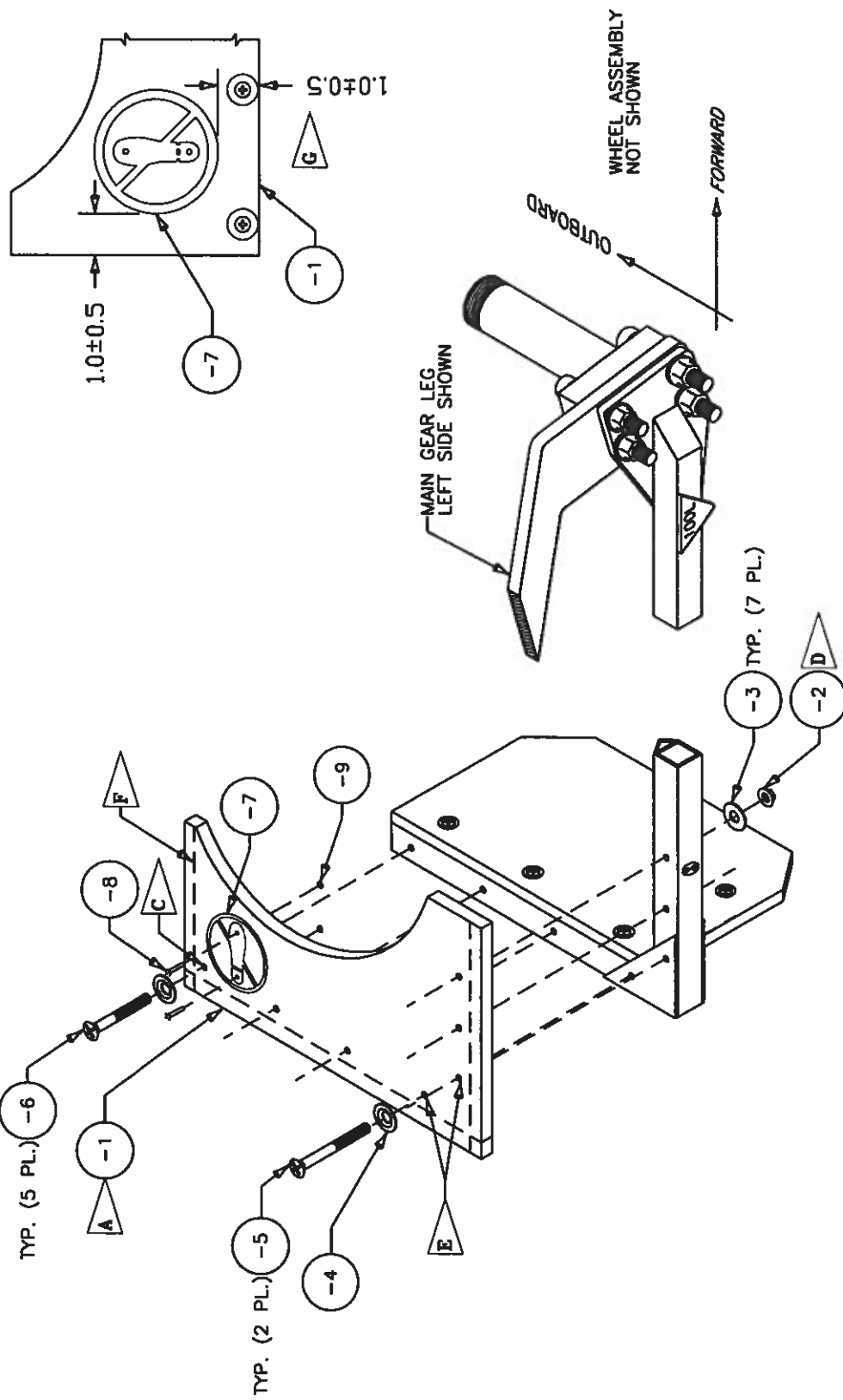
**BOLT SCHEDULE**

ITEM	QTY	DESCRIPTION	PART NO.	A/C APPLICATION
-7	4	NUTS	MS1148-40 OR MS1148-44 OR MS1148-46	CESSNA 180/185 MODELS
-7	4	BOLTS	182 (S/N 33000-51888) & 205/206 182 (S/N 51887-53988), 182E, 182F, & 182G	
-7	4	BOLTS	1824, 1824L, 1824R, 1824L, 1824R, & 1824N	
-7	4	BOLTS	1824, 1824L, 1824R, 1824L, 1824R, & 1824N	
-7	4	BOLTS	182P, 182Q, 182R, & T182	
-8	4	BOLTS	180, 180A, 180B, 180C, 180D, 180E, 180F, 180G, & 180G	
-8	4	BOLTS	180F, & NEWER MODELS AND 185	
-8	4	BOLTS	182 (S/N 51887-53988) & 205/206	
-8	4	BOLTS	182 (S/N 33000-51888), 182H, 182I, 182J, 182K, 182L, 182M, & 182N	
-8	4	BOLTS	182P, 182Q, 182R, & T182	
-8	4	BOLTS	182P, 182Q, 182R, & T182	

\* QUANTITY AS REQUIRED; WASHER (3) EACH SUPPLIED WITH KIT.

ITEM	QTY	PART NO.	MATERIAL	DIMENSION	SPECIFICATION
-1	▲	MS1148-40/44/46	WASHER		
-2	▶	MS1148-40/44/46	WASHER		
-3	▶	MS2000-35	WASHER		
-4	▶	MS2000-35	WASHER		
-5	▶	MS1148-40	NUT		
-6	▶	MS1148-40	NUT		
-7	▶	SEE BOLT SCHEDULE	BOLT		
-8	▶	SEE BOLT SCHEDULE	BOLT		
-9	▶	IR, TL, B	GRAVEL DEFLECTOR WELDMENT		

D	ECO AT-166	03/11/16	JMK
C	ECO AT-150	10/31/12	CBW
B	ECO AT-128	07/15/08	BAS
A	REVISED PER ECO AT-69/06/14/01	MAH	
ORIG	ISSUED PER ECO AT-39/07-04-97	DRG	
LET	REVISION	DATE	INIT
<b>AERO TWIN, INC.</b>			
2403 MERRILL FIELD DRIVE ANCHORAGE AK 99501			
CESSNA 180/182/185/205/206			
<b>GRAVEL DEFLECTOR INSTALLATION</b>			
X.X	X.XX	X.XX	X.X
± 0.1	± 0.05	± 0.01	± .3
DWG: DRG	DATE: 8-27-97	SCALE: NTS	
APP'D: M. LOVETT	DWG: GD5/6-I-1		
SHEET: 1 OF 1			



**NOTE:**

- ▲ GD-102 IS SUPPLIED UNDRILLED AND OVERSIZED. INSTALL SCRAPER ONLY AFTER DEFLECTOR FRAME IS INSTALLED ON AIRCRAFT AND WHEEL/TIRE ASSEMBLY IN PLACE ON AXLE.
- ▲ FIT SCRAPER ON TOP SURFACE OF FRAME. SNUG AGAINST TIRE. MATCH DRILL 3/16 HOLES THROUGH SCRAPER AT (7) PLACES. BORE OUT HOLES THROUGH SCRAPER USING 1/4 DRILL.
- ▲ INSTALL SCRAPER USING LISTED HARDWARE. TIGHTEN ITEM -2 UNTIL OUTSIDE EDGE OF ITEM -4 CONTACTS SURFACE OF ITEM -1. MAINTAIN MINIMUM OF 1.5-THREAD EXPOSURE THROUGH LOCKING FEATURE OF ITEM -2.
- ▲ (2) MS24694S68 ARE INSTALLED IN THE CORNER THROUGH THE GUSSET PLATE.
- ▲ TRIM EXCESS MATERIAL FROM SCRAPER, FLUSH WITH OUTSIDE EDGE OF FRAME.
- ▲ AFTER TRIMMING SCRAPER, POSITION ITEM -7 AS SHOWN AND MATCH DRILL SCRAPER TO ACCEPT ITEM -8 RIVETS. ATTACH ITEM -7 TO TOP OF SCRAPER USING ITEMS -8 AND -9. OPTIONALLY, ITEMS -7, -8 AND -9 MAY BE OMITTED AND REPLACED WITH A SELF-ADHESIVE "NO STEP" PLACARD (AVAILABLE FROM WWW.AIRCRAFTSPRUCE.COM AS P/N 09-34500) AFFIXED TO THE TOP SURFACE OF THE SCRAPER, CENTERED AT THE REAR EDGE.

D	ECO AT-166	03/11/16	JMK
C	ECO AT-150	10/31/12	CBW
B	ECO AT-128	07/15/08	BAS
A	REVISED PER ECO AT-69	06/14/01	MAH
	ORIG ISSUED PER ECO AT-39	07-04-97	DRG
LET	REVISION	DATE	INIT

**AERO TWIN, INC.**  
 2403 MERRILL FELD DRIVE ANCHORAGE AK 99501  
 CESSNA 180/182/185/205/206/207

**TIRE SCRAPER  
 INSTALLATION**

X.X	=	X.XX	=	X.XX	=	X.X'	=
± 0.1		± 0.05		± 0.01		± 3'	
APP'D: M. LOVETT DATE: 6-27-97 SCALE: NTS							
SHEET: 1 OF 1 DWG: GD-I-2							

ITEM	QTY	PART NO.	DESCRIPTION	MATERIAL	DIMENSION	SPECIFICATION
-1	2	GD-102	TIRE SCRAPER			GD-P-3 OF 3
-2	14	MS21042L3	NUT			ALT P/N MS24694S68
-3	14	MS21487L32P	WASHER			
-4	14	A3235-GD-035	WASHER			
-5	4	MS24694S68	SCREW			
-6	10	MS24694S64	SCREW			
-7	2	GD-NSP	PLACARD			GD-NSP: 1 OF 1
-8	4	MS20470M-9	RIVET			
-9	4	MS21487M32P	WASHER			