

MGTF RADIATOR ASSEMBLY AND FASTENERS

Lonnie Cook - TF681, TF7211 - Rev 25-Mar-2025

- > **[16]** Flat Head Blunt Screws for Sheet Metal – (chrome grille)
18-8 Stainless Steel, Number 10 Size, 1/2" Long
box of 100, McMaster-Carr
93195A429

<https://www.mcmaster.com/catalog/131/3424/93195A429>



- > **[12]** Rounded Head Blunt Screws for Sheet Metal – (painted parts)
Black Zinc-Plated Steel, Number 10 Size, 1/2" Long
box of 50, McMaster-Carr
92115A236

<https://www.mcmaster.com/catalog/131/3424/92115A236>



- > **[28]** J Type Nut #10 Screw Size
.027-.045 Range
pack of 100, Au-ve-co A2303

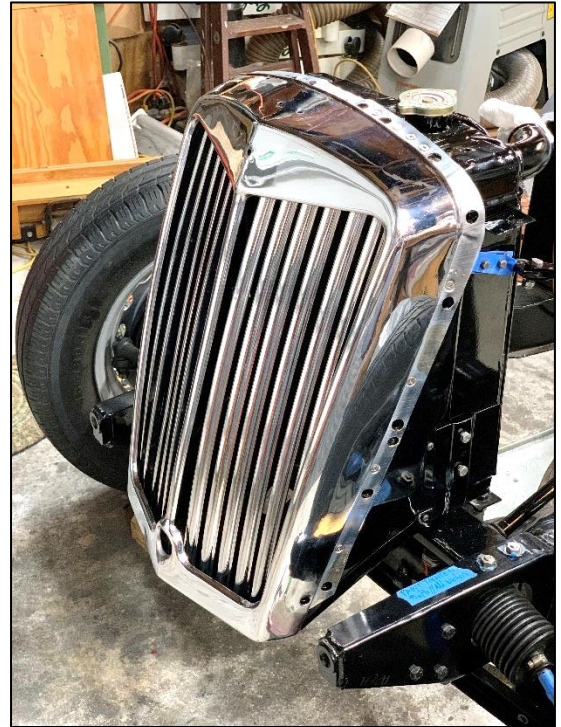
<https://www.clipsandfasteners.com/J-Nut-10-Screw-Size-027-045-Range-p/a2303.htm>



- > Finger Clips & Screws, Set, for Slats, TF
Abingdon Spares
19-099D

Clips are too narrow.

<https://abingdonspares.com/products/finger-clips-screws-set-for-slats-tf? pos=2& sid=d0ac5c32f& ss=r>



- > **[0-2]** 1/4 BSF Cage Nuts if missing from the two square holes
in the base plate. Probably not available. Check eBay.

The nuts are on the top side of the base plate.

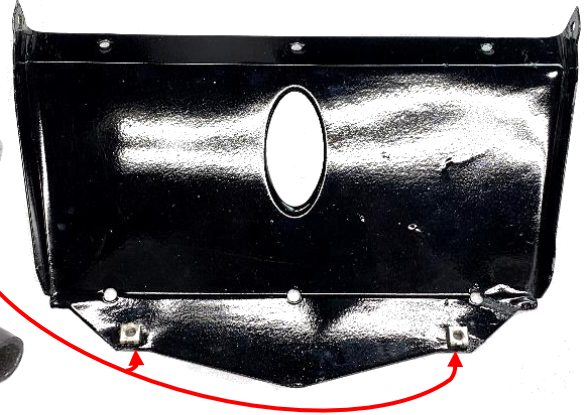
- ▶ 1/4-20 Cage Nuts can be substituted. Look original.

Size 0.064"-0.105" Thick Panel

pkg of 25, McMaster-Carr 90680A610 (and other suppliers)

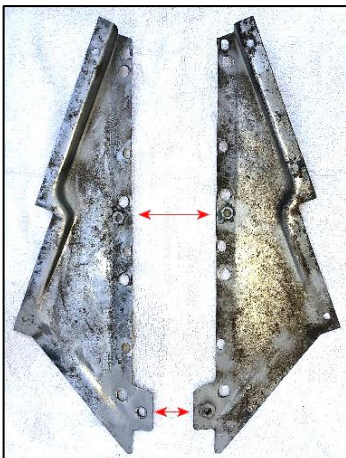
<https://www.mcmaster.com/catalog/131/3676/90680A610>

- ▶ 1/4-20 U-Type Speed Nuts can be used
instead of cage nuts. Possibly Hillman 1149.
Approx. 13/16"L x 1/2"W, 1/2" center hole to edge.



- > **[0-4]** 5/16 BSF Nuts. Weld to side plates if needed. Abingdon Spares 23-435 (and other suppliers)

<https://abingdonspares.com/products/5-16-standard-hex-nut-22-tpi? pos=5& sid=bf66c8368& ss=r>



Each radiator side plate has two 5/16 BSF nuts welded near the front: one at the bottom and one in the middle. If they are missing, then replace them by welding new nuts centered on the holes. The nuts are on the inward facing side.

Do not weld nuts to the
outside of the side plates



Assemble the radiator before attaching it to the chassis:

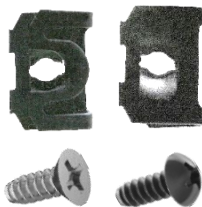
- 1) Attach the radiator cradle and stay tube brackets to the radiator with [8] 2BA hex screws and square UK lock washers. Two through each vertical side of the cradle at the lower side of the radiator. Two through each radiator stay tube bracket at the upper side of the radiator.
- 2) Attach [28] #10 J-nuts to the radiator, radiator cradle, radiator side plates, and grille slat assembly. The screw-retaining side of the J-nut faces away from the head of the screw.
 - a. Grille Slat Assembly – [5]
 - i. Four on brackets at top / two on each side. (Flat head stainless steel screws.)
 - ii. One at bottom-center. (Black round steel screws.)
 - b. Radiator Cradle – [7]
 - i. Three at middle. (Black round steel screws.)
 - ii. Four at sides / two on each side. (Black round steel screws.)
 - c. Radiator – [8]
 - i. Four on brackets at top / two on each bracket. (Flat head stainless steel screws.)
 - ii. Four on the sides / two on each side. (Black round steel screws.)
 - d. Radiator Side Plates – [8]
 - i. Eight on the front of the side plates / four on each plate. (Flat head stainless steel screws.)



Radiator top brackets without slat assembly.



Restoration test fit without base plate



Flat head stainless screws go into recessed holes in grille shell.

Round head black screws go into painted parts (plus into the non-recessed hole in bottom of grille).

- 3) Attach the slat assembly to the grille shell.
- 4) Attach grille, radiator side plates, and base plate to the radiator and cradle.
 - a. Weave the rubber webbing through holes in the grille and side plates as you assemble the radiator.
 - b. The front of the base plate goes inside the grille shell.
 - c. The rear of the base plate fits below the cradle.
 - d. The bottom rear of the two radiator side plates fits between the base plate and radiator cradle.

MGTF RADIATOR MOUNTING AND FRONT WINGS

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> **[1 kit]** 5/16 BSF Bolts, Nuts, Square Lock Washers, Fender Washers Included in MG TF front fender mounting hardware kit
Abingdon Spares 23-605 (and other suppliers)

https://abingdonspares.com/products/mg-tf-front-fender-mounting-hardware-kit?_pos=2&_sid=01c51e894&_ss=r

> **[1 set]** Rubber Mount Set for Radiator, with Rings. Abingdon Spares 19-104 (and other suppliers)

<https://abingdonspares.com/products/rubber-mount-set-for-radiator-with-rings>

> **[2]** 3/8 (BSF) Standard Hex Nut 20 TPI. Abingdon Spares 23-455 (and other suppliers)

https://abingdonspares.com/products/3-8-standard-hex-nut-20-tpi?_pos=13&_sid=25c0be391&_ss=r

> **[2]** 3/8 (BSF) Jam Nut 20 TPI. Abingdon Spares 23-470 (and other suppliers)

https://abingdonspares.com/products/3-8-jam-nut-20-tpi?_pos=1&_sid=fb480aa36&_ss=r



I recommend installing a new water pump, engine control link and bracket, and engine mount while the radiator is out.

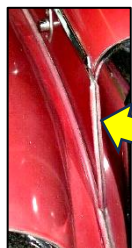
Mount the radiator and grille assembly to the radiator support. Use the handcrank to check alignment. Adjust the 3/8 BSF nuts with about 1/8" gap from the big washers and lower grommets. Tighten the jam nuts against the nuts to lock them in place. The big washers should be able to slightly move.

Radiator cradle stud → rubber grommet with ring → radiator support → rubber grommet with ring → big washer → 3/8 BSF nut → 3/8 BSF jam nut.

Install a new Gates Green Stripe II TR22392 fan belt, new radiator hoses, and clamps.

Loosely attach the radiator stay tubes. Loosely attach the two engine side panels to the chassis and to the support brackets on the radiator and firewall. Shim the height of the side panels with washers between support brackets and side panels.

Loosely attach the front wings. Two 5/16 BSF hex bolts with washers and square lock washers go through the front of each wing, through the engine side panel, through the grille shell, and into the welded nuts on the radiator side plate. Loosely insert the 1/2" bumper assembly bolt into the chassis extension to align each wing.

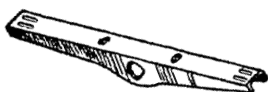


Loosely attach the tie bar between engine side panels. The long part of the bracket is toward the front. The horizontal part of the bracket is below the bar. Insert 5/16 BSF bolts from the engine-side; the nuts and washers are on the wheel-side.

Insert narrow piping about 8" long between engine side panel and radiator grille. Set the bonnet in place. Adjust the engine side panels, radiator angle, radiator stay tubes, tie bar, latches on the bonnet and on the engine side panels, and piping for a good fit. Then tighten everything. Attach the bonnet permanently.

Attach the splash apron under the grille shell with **[2]** 1/4 BSF (1/4-20) dome head Phillips screws into cage nuts in the base plate. Rubber grommet and washer under the Phillips heads. Attach the apron to the wings with **[4]** 1/4 BSF hex screws, washers, and nuts, two on each side.

**RADIATOR
SUPPORT**



SERVICE PARTS LIST

M.G. MIDGET (Series "TF")

DESCRIPTION	No. off per Car	Commencing Chassis No. TF501	
		Part No.	Illus. No.
RADIATOR AND CONNECTIONS			
Radiator complete	1	N.B.P.	
Case assembly	1	ARG502	A96
False nose.....	1	ARG503	A97
Dummy filler cap	1	ARG505	A103
Webbing—rubber	1	ARG506	
Support—bonnet hinge rod—outer	1	81810	A107
Support—bonnet hinge rod—inner	1	81811	A143
Screw (2 BA)—bonnet hinge rod	2	ARG552	
Nut (2 BA square)—bonnet hinge rod	2	ARG553	
Spring washer—bonnet hinge rod	2	ARG582	
Nut (2 BA hexagon)—dummy filler	2	ARG589	
Badge with nut and washer	1	ARH900	A98
Grille assembly	1	ARG511	A99
Slat	12	ARG512	
Top securing plate assembly	1	ARG608	
Bottom securing plate	1	ARG514	
Clip—slat fixing	24	ARH596	
Screw	24	ARG642	
Nut—Simmond speed (case and grille)	5	ARG585	
Screw—recessed head (case and grille)	4	CJZ1004	
Screw—mushroom head (case and grille)	1	ARG639	
Internal assembly	1	ARG517	A100
Filler cap	1	ARH1022	A102
Drain tap	1	ARG647	A101
Stay-rod bracket	2	ARG586	
Screw—hexagon head (stay-rod bracket)	4	ARG588	
Spring washer	4	ARG582	
Bolt—hexagon head (cradle to sides)	4	ARG580	
Spring washer	4	ARG581	
Nut—Simmond speed	28	ARG585	
(Internal to case—4)			
(Grille brackets—5)			
(Side plate—19)			
Screw—recessed head	16	CJZ1004	
(Side plate to case—8)			
(Brackets to case bracket—8)			
Screw—round head (internal to sides).....	11	PJZ1004	
Screw—mushroom head (grille bottom)	1	ARG639	
Side plate sub-assembly—R/H	1	ARG615	A144
Side plate sub-assembly—L/H	1	ARG616	A145
Base plate	1	ARG550	A146
Screw—hexagon head (base to case)	2	ARG591	
Spring washer	2	ARG581	
Cage nut	2	ARG584	
Support member—radiator	1	185919	A105
Stay tube—radiator	2	186253	A106
Yoke end—stay tube	2	1765	A108
Packing block	4	50988	A104