

# DA Engine Info; 50R, 60, 85, 100, 120, 150, 170

1815 S. Research Loop

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**All DA motors take the same spark plug** Plug gap .018 to .020

NGK CM-6

**Muffler bolts M5**

**Use a 4m hex wrench for all M5 cap screws.**

- Use 4.8 or 6 volt batteries only. Higher voltage will damage the ignition system and will void the warranty. We recommend a 1600 mAh or larger capacity pack. With this size pack, the ignition should last longer than your receiver pack will. If the meter shows 5.0 volts or less, don't fly, re-charge.
- If using batteries rated at more than 6 volts, a 5.5 or 6 volt regulator must be used.

For spinner mounting, the crankshaft extension is threaded for M5 screws. In this application (steel to steel) the 10-32 SAE screws supplied with most spinners will work fine in the M5 threaded hole. Do not substitute 10-32 screws for any other screws on the engine!

## **Starting**

1. Check that prop bolts are tight and spinner is secure.
2. Make sure the starting area is free of dirt, sand, gravel, or other loose debris
3. Turn on the radio system and check the throttle operation and position.
4. Have someone (with eye protection) firmly hold the plane.
5. Close the choke completely.
6. Open the throttle to approximately 1/4 position.
7. Turn on the ignition. **ALWAYS BE PREPARED FOR THE MOTOR TO START ON ANY FLIP OF THE PROP**, whether the ignition switch is on or off!
8. Always wear a heavy leather glove when starting the motor.
9. Give the prop a quick, firm, flip counter clockwise. Follow through quickly as you flip the prop so your hand is out of the propeller's path. Repeat until the motor fires or "pops".
10. Open the choke.
11. Set throttle to idle position. (carb butterfly plate slightly open)
12. Flip the prop again until the motor runs.
13. Let the motor warm up for 15 or 20 seconds before advancing the throttle.

## **DA50R**

Motor tab Screws M5

Rear Standoffs mounts are ¼ -20

Carb Setting 1 5/8 open on Low needle 1 7/8 open on High Needle

- Some recommend props are:
  - For break-in: Menz 22x8, Mejzlik 22x8, 22x10, 23x8, 23x10, Bolly (wood or carbon) 22x10, 20x12 3 blade, 21x11.5N 3 blade.
  - After break-in: Same as above, but also Menz 24x8, Mejzlik 23x10,

## DA60

A 24 oz. (or larger) fuel tank is recommended

Carb setting 1 1/8 open on Low, 1 open on High

### Torque specifications

	<u>Size</u>	<u>Torque setting</u>
Spark plug:	CM-6, 10mm	90 in. lbs.
Steel prop bolts:	M5x 45mm	75 in. lbs. / wood props, 90 in. lbs. /carbon props.
Aluminum crankcase bolts:	M5x16mm	70 in. lbs.
Steel cylinder base bolts:	M5x16mm	95 in. lbs.
Aluminum carb mount bolts:	M5x75mm	50 in. lbs.*

- Some recommended props are:
- Wood: 22x10, 23x8, 23x10, 24x8, 24x10
- Mejzlik Carbon: 23x8, 23x10, 24x10, 24x10 TH,
- Mejzlik Carbon 3 blade: 21x12, 22x10

## DA85

A 24 -32oz. (or larger) fuel tank is recommended

Carb setting 1 1/2 open on Low, 1 1/2 open on High

- Some recommended break-in props are:  
Menz 26x10, Mejzlik 26x10, Mejzlik 27x10TH, 24x10 Mejzlik 3 blade
- Some recommended props after break-in are all of the above as well as:  
26x12 Mejzlik, 26x12 Menz, 26x10 Xoar, 25x12 AirModels 3 blade.
- If a tuned pipe system is used, all props listed above can be used along with:  
27x10 Mejzlik, 27x10 Menz, 27x10 Xoar, 28x10 Mejzlik, 24x12 Mejzlik 3 blade, 24x12W Mejzlik 3 blade.

	<u>Size</u>	<u>Torque specifications</u>
Spark plug:	CM-6, 10mm	90 in. lbs.
Steel prop bolts:	M5x 50mm	75 in. lbs. / wood props, 90 in. lbs. /carbon props.
Steel crankcase bolts:	M5x16mm	90 in. lbs.
Steel cylinder base bolts:	M5x16mm	90 in. lbs.
Steel carb mount bolts:	M5x75mm	50 in. lbs.*

## DA100

A 32oz. (or larger) fuel tank is recommended

Carb setting 1 3/8 open on Low, 1 1/2 open on High

The following props are recommended:

For break-in: Menz 26x10, 26x12, 27x10 Mejzlik 26x12, 28x10 Bolly 26x12

For normal use: Mejzlik 27x10, 28x10, 28x12, (25x12, 26x12 3 blades)

Menz 26x10, 27x10, 28x8, 28x10

Bolly 28x10

Airmodels 28x10, (25x12, 26x12 3 blades)

## DA 120

- Settings will vary with altitude, temperature, humidity, fuel, carb variances, etc. A general starting point is: 1 1/2 open on the Low needle, 1 1/2 open on the High needle.
- A 32 oz. (or larger) fuel tank is recommended. The tank must be vented. The carb has a strong pump, so the tank can be mounted almost anywhere. The fuel line and tank stopper must be gas compatible. Do not use any silicone sealers on the fuel system. Gas can break it down and carry it into the carb.
- The carburetor should have at least 1 1/2" (38mm) of clearance between the intake and the bottom of the cowl. If there is less than 1 1/2", make an opening in the cowl below the carb at least as large as the carb intake diameter.
- Some recommended props are:  
Wood: 26x12, 27x10, 28x10, 29x10  
  
Mejzlik Carbon: 27x12TH, 28x10, 28x12, 29x10S  
  
Mejzlik Carbon 3 blade: 26x12, 27x12TH
- Screws can come loose! After a few flights check that all screws are secure. Periodically check that all screws are tightened to the correct torque rating. It's recommended to replace, rather than re-use the red aluminum screws.

	<u>Size</u>	<u>Torque specifications</u>
<b>Spark plug:</b>	<b>CM-6, 10mm</b>	<b>90 in. lbs.</b>
<b>Steel prop bolts:</b>	<b>M5x 50mm</b>	<b>75 in. lbs. / wood props, 90 in. lbs. /carbon props.</b>
<b>Aluminum crankcase bolts:</b>	<b>M5x16mm</b>	<b>70 in. lbs.</b>
<b>Aluminum cylinder base bolts:</b>	<b>M5x16mm</b>	<b>60 in. lbs.</b>
<b>Steel cylinder base bolts:</b>	<b>M5x16mm</b>	<b>95 in. lbs.</b>
<b>Steel carb mount bolts:</b>	<b>M5x75mm</b>	<b>50 in. lbs.*</b>
<b>Aluminum carb mount bolts:</b>	<b>M5x75mm</b>	<b>50 in. lbs.*</b>
<b>Steel motor mount bolts:</b>	<b>M6x16mm</b>	<b>120 in. lbs.</b>

**\*Caution: Care must be taken to not over tighten the carb mounting bolts. Over tightening can distort and damage the injected molded reed valve parts and rubber gaskets.**

- For spinner mounting, the crankshaft extension is threaded for M5 screws. In this application (steel to steel) the 10-32 SAE screws supplied with most spinners will work fine in the M5 threaded hole. Do not substitute 10-32 screws for any other screws on the engine!

## DA 150

A 50 oz. (or larger) fuel tank is recommended.

Carb setting 5/8 open on Low, 2 open on High

For break-in: Bolly 30x12, Menz 30x10, 32x10 Mejzlik 30x10

For normal use: Bolly 30x12, 30x15, 32.5x11

Menz 30x10, 30x12, 32x10, 32x12

Mejzlik 30x10, 30x12, 32x10 2 blades, and 28x12, 29x12 3 blades

AirModels 32.5x11 2 blade, 28x12, 29x12 3 Blades

- The carburetor should have at least 1 1/2" (38mm) of clearance between the intake and the bottom of the cowl. If there is less than 1 1/2", make an opening in the cowl below the carb at least as large as the carb intake diameter.

## DA170

A 50 oz. (or larger) fuel tank is recommended.

Carb setting 5/8 open on Low, 2 open on High

### Bolt torque specifications:

Carb bolts (5mm): 40 in. lbs.

Cylinder base bolts (6mm): 75 in. lbs.

Spark plugs: 75 in. lbs.

Prop bolts (6mm): 75 in. lbs.

- The following props are recommended:

For break-in Menz 30x12, 32x10 Mejzlik 30x12, 32x10

For normal use Menz 30x12, 32x10, 32x12

Mejzlik 30x12, 32x10 2 blades, and 28x12, 28.5x12, 29x12 3 blades

AirModels 32x11 2 blade, 29x12 3 Blades

- The carburetor needs at least 1 1/2" (38mm) of clearance between the intake and the bottom of the cowl. If there is less than 1 1/2", make an opening in the cowl below the carb at least as large as the carb intake diameter.

# DESERT AIRCRAFT

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Repair/Return Form (Please make copy)

Please fill out and enclose this form when shipping items for service

Customer Name \_\_\_\_\_ Date \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Country \_\_\_\_\_

Phone # \_\_\_\_\_ Cell # \_\_\_\_\_

Email \_\_\_\_\_

Items in Box:

DA50 Serial # \_\_\_\_\_ DA60 Serial # \_\_\_\_\_ DA85 Serial # \_\_\_\_\_

DA100 Serial # \_\_\_\_\_ DA120 Serial # \_\_\_\_\_ DA150 Serial # \_\_\_\_\_ DA170 Serial # \_\_\_\_\_ DA200 serial  
# \_\_\_\_\_ Other \_\_\_\_\_

Single Ignition Serial # \_\_\_\_\_ Twin Ignition Serial # \_\_\_\_\_

Prop Bolts? \_\_\_\_\_

Prop washer? \_\_\_\_\_

Muffler(s)? \_\_\_\_\_ Muffler screws \_\_\_\_\_

Standoffs? \_\_\_\_\_

Other Items? \_\_\_\_\_

REASON FOR RETURN?

Crash: Yes \_\_\_ No \_\_\_ Other \_\_\_\_\_

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