miniature aircraft usa

#0818

PRO II GRAPHITE REAR RUDDER SERVO MOUNT

1	#0049	M2x10 SOCKET HEAD BOLT
1	0818-1	GRAPHITE SERVO MOUNT
1	0818-2	RUDDER SERVO BOOM MOUNT
1	0818-3	RUDDER SERVO BLOCK
4	0037	M2.5X25 PHILLIPS MACHINE SCREWS
4	0079	M3X35 SOCKET HEAD BOLT
8	0009	M3 WASHERS
4	0019	M3 LOCKNUTS
10	0560-8	M2.5 FLAT WASHERS
1	106-36	M2X29 CONTROL ROD
2	0389	ELECTRICAL WIRE RETAINERS
4	0020	M2.5 LOCKNUTS
2	0043	M2X10 SLOTTED MACHINE SCREWS
2	0015	M2 HEX NUT
1	0133	BALL LINK
1	0361	M2 CONTROL BALL
1	0018	M2.0 LOCKNUT
1		INSTRUCTIONS

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IMPORTANT NOTE:

When using this servo mount kit in conjunction with accessory #0819, a very small portion of the lower rear area on the elevator servo mount plate #0586-5 must be removed by grinding or sanding. Approximately 1.0mm of additional clearance is needed. Early aluminum framed models require no changes. 1998 models of kit #1001 or #1003 With "flat" type side frames do not require the modification if #0819 is added.

A. Remove the tail boom before beginning assembly using the rudder servo as a guide, mount the rudder servo block #0575-3 and the rudder servo boom mount #0818-2 to the graphite servo mount #0818-1 using four m2.5x25 phillips machine screws #0037 and four m2.5 flat washer #0560-8. Remove the servo at this time.

B. Remove the four #0077 bolts holding the tail boom support halves #0185 and install the assembled graphite servo mount #0818-1 using four m3x35 socket head bolts #0079, eight m3 small washers #0009, and four #0019 locknuts. The graphite servo mount #0818-1 mounts on the right side of the upper main frames. Do not fully tighten.

C. The tail rotor control rod will vary depending on the tail boom length (model type) that the rear rudder kit is being used on. The following may be used as a guide:

1) 31.5" boom (Pro, Gas, .60 Graphite) uses #106-36 control rod in place of the original #0556-3 control rod extension.

2) 30.0" boom (Std. 60 , Old Custom.60) uses only the original #0375 control rod.

3) Any booms shorter than 30.0 will require cutting and threading of the #0375 tail rotor control rod. NOTE: Optionally the #0544 graphite push rod kit is highly recommended. Start a plastic ball link #0133 on the end of the chosen control rod.

D. Slide the tail boom thru the rubber support block #0818-2 and into the front tail boom support. #0185. Spin the main shaft back and forth until the tail drive engages, then push the boom in as far as it will go. Mark the boom next to the tail boom support halves #0185 with a piece of tape or put a small scratch on it with an X-acto knife. Slide the boom back about 1.0mm. Standing behind the model, sight the tail box to the mainshaft. Make sure that the T/R shaft is perpendicular to the mainshaft. Tighten the four m3x35 bolts in the tail boom support halves, then recheck alignment. Realign the original push rod guides on the tail boom. Secure the top side of the rudder support blocks #0818-2 using one m2x10 socket head bolt #0049, two m2.5 washers #0560-8, and one m2 lock nut #0018. Tighten securely.

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E. As per the drawing mount the tail rotor servo to the rudder servo mount using four m2.5 flat washers #0560-8 and four m2.5 lock nut #0020. Tighten securely ,but do not over compress the servo grommets.
Note: The servo output is towards the front of the helicopter.

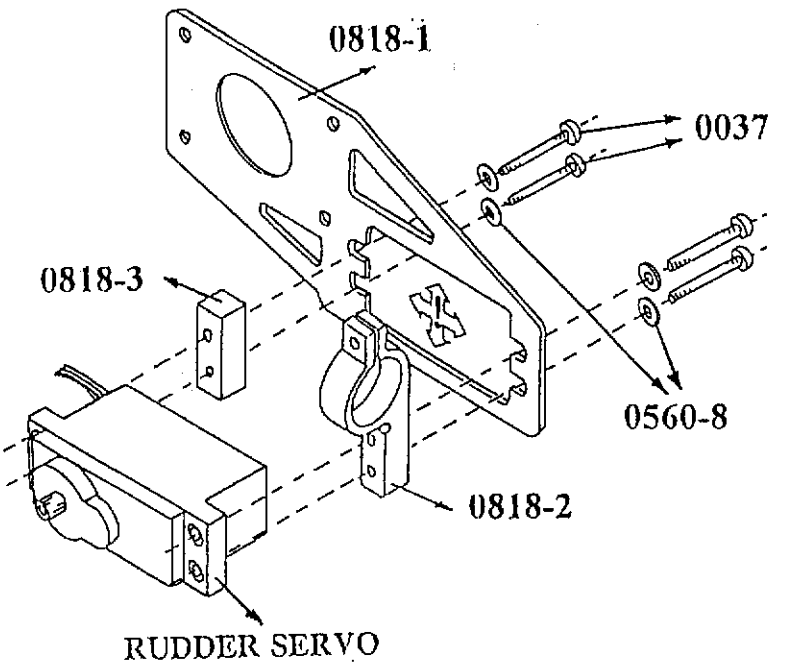
F. OPTIONAL: A small m2.2x4.5 phillips self tapping screw #0024 may be installed thru the rudder servo block #0818-2 and into the boom. It will be necessary to drill a small hole prior to installing.

G. Route the tail rotor servo wires using two electrical wire retainers #0389. The front dog bone bolt and the top bolt on the fan shroud front support #0549-6 works well for locating the wire retainers.

H. Activate electronic tail rotor compensation (ATV) for "RIGHT" (clockwise) rotor rotation. Check direction of tail rotor compensation and gyro. Put collective stick at the mid position. Position a servo wheel on the rudder servo. Make sure the wheel is square to the servo. As per the drawing, install one m2x10 slotted machine screw #0043, one m2 steel ball #0361 and one m2 hex nut 30015 into a hole at least 11mm out from the center of the servo wheel and mount it 90 degrees facing upwards. Secure with Loctite using one m2 hex nut #0015.

NOTE: The rudder ball on the servo wheel will be in a neutral position at 1/2 collective stick.

I. Adjust the tail rotor control rod to achieve your original set up.


0818-1
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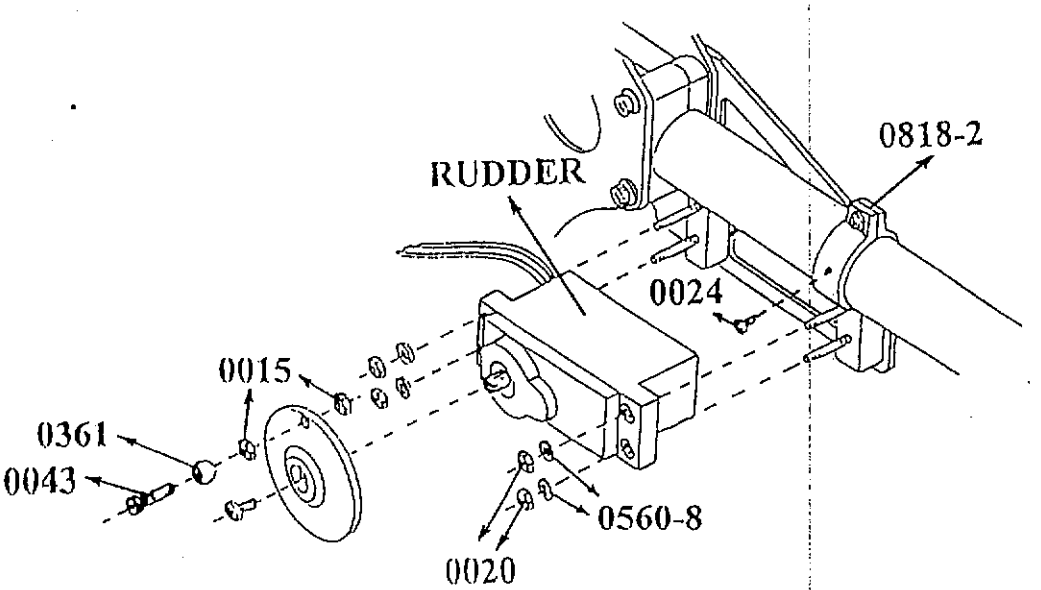
RUDDER SERVO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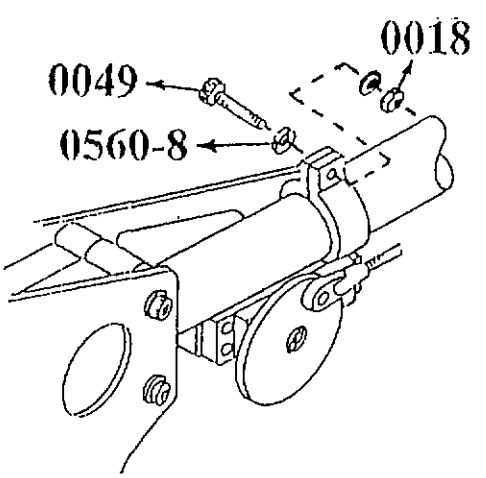
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