



SERVICE LETTER
FOR INSTALLING
NEBLE PLUG CLEARANCE CUP
ON THE SIMPLEX MODEL 316

Document No.: SL2009-003
Date: April 27, 2009
Revision: I/R
Used On: Simplex Model 316 Installed on the
Eurocopter Model EC225LP

Approved by: _____

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Sustaining Engineering and QA Manager
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Log of Revisions

Rev.	Description of Revision	Date	Approved
I/R	Initial Release	April 27, 2009	TWP



SYSTEM MODELS AFFECTED:

Model 316 Fire Attack System (FAS)

SERIAL NUMBER EFFECTIVITY:

<u>S/N</u>	<u>MODEL NUMBER</u>	<u>DESCRIPTION</u>
316-004	316-000000-000	Model 316 Fire Attack System

FAA APPROVAL:

The incorporation of a Neble plug cup feature falls within the Simplex FAA approved minor change agreement document number MMCA-2008.

MANPOWER:

Sixteen (16) MHRS (Estimated)

COMPLIANCE:

Required when Neble plugs are installed on rotorcraft

SPECIAL TOOLS:

Item #	Description	Quantity
1	Latex gloves (butyl)	10 ea.
2	Safety glasses	1 ea.
3	Hot glue gun	1 ea.
4	Hot glue gun cartridge	4 ea.
5	Sand paper 180, 220, 400 and 600	As required
6	Mix cups and bucket	2 medium buckets and 10 small cups
7	Mixing sticks	20 ea.
8	Tape measure	1 ea.
9	Fiberglass roller	1 ea.
10	Brushes	1 ea. 2", 1 ea. 3" and 1 ea. 4"
11	24 grit rolocs	1 box
12	26 grit rolocs	1 box
13	Air saw	1 ea.
14	Air saw blades	15 ea.
15	Right angle air grinder	1 ea.
16	Safety masks	6 ea.
17	Masking tape	1 roll narrow, 1 roll wide
18	Masking plastic	As required

MATERIALS:

Item #	SMC#	Description	Quantity
1	751021	3/4 oz. Mat	160 in ²
2	751026	9.7 oz. Cloth	160 in ²
3	751010	Polyester gel coat- white	1 qt.
4	751010	282 Carbon	80 in ²
5	751039	Hi Point 90 catalyst	6 oz.
6	750134	Vinyl ester resin	2 qt.
7	SMC2000-040	Heidi Putty	1 pint
8	751049	Body lite filler	1 pint
9	751050	Body lite filler hardner	3 oz.
10	SMC2000-041	Type I sealant with pigment	1 pint
11	N/A	Neble plug clearance cup	1 ea.
12	751031	10 oz. 4" wide Silane tape	60 in.
13	751022	1 1/2 oz. mat	80 in ²
14	N/A	Acetone	2 qt.

WEIGHT AND BALANCE:

None

ELECTRICAL LOAD DATA:

None

PUBLICATIONS AFFECTED:

None

ACCOMPLISHMENT INSTRUCTIONS:

Step	Description
1	Locate Neble plug interference location on top of Fire Attack System tank shell
2	Using the clearance cup supplied lay out top tank shell cut-out as required to define cut-out shape that will receive clearance cup
3	Check the tank internal area, under where the cut-out will be, verify clearance of any lateral baffles. If a lateral baffle will require notching use caution when cutting top clearance hole as not to run saw blade thru the lateral baffle.
4	Cut top tank shell as defined in step 2. Use caution if crossing lateral baffles as defined in step 3. If lateral baffle is interfering it will be necessary to cut lateral baffle from top skin under the area of the top tank shell cut-out.
5	Remove cut out area from top tank shell.
6	If lateral baffle interferes notch baffle to fit clearance cup profile within 1/8". Note the lateral baffle will be required to be tied back in to clearance cup in accordance with tie in lay up defined in step 16-18.
7	Using angle grinder and rollocs remove surface agent a minimum of 4" around cut out area and any notches on lateral baffle
8	Clean tank as necessary to prepare for installation of the clearance cup and fiberglass reinforcement
9	Using a "bridge", mixing stick is acceptable, hot glue the clearance cup in place. Ensure top of cup is flush with top of tank shell.
10	Using masking tape mask off top of the circumference of the clearance cup to keep resin in during installation of the composite reinforcement
11	On the inside of the clearance cup perimeter place the first of ¾ oz. Mat (P/N751021). Apply Vinylester resin #7775 (P/N751034) catalyzed at 2% per volume using MEKP Hi-point 90 catalyst with a brush. Roll out to remove all air bubbles



Step	Description
12	Apply 1 layer of Hexcel 282 carbon (P/N751010) over ¾ oz. mat. Roll out and apply resin to any dry spots
13	Apply 2nd layer of Hexcel 282 carbon (P/N751010) over ¾ oz. mat. Roll out and apply resin to any dry spots
14	Apply 9.7 oz Mat (P/N751026). Apply Vinylester resin #7775 (P/N751034) catalyzed at 2% per volume using MEKP Hi-point 90 catalyst with a brush. Roll out to remove all air bubbles
15	Apply final layer ¾ oz. Mat (P/N751021) on the gel coated surface. Apply Vinylester resin #7775 (P/N751034) catalyzed at 2% per volume using MEKP Hi-point 90 catalyst with a brush. Roll out to remove all air bubbles
	Note: If it was required to cut into the lateral baffle follow steps 16-18. If not omit steps 16-18 and continue at step 19.
16	To tie baffle into clearance cup apply one layer of 1 1/2 oz. mat (P/N 751022), on both sides of lateral baffle, at a minimum of 2" on each side of tie in. Apply Vinylester resin #7775 (P/N751034) catalyzed at 2% per volume using MEKP Hi-point 90 catalyst with a brush. Roll out to remove all air bubbles
17	Apply one layer of silane tape (P/N 751031) at a minimum of 2" on each side of tie in. Roll out and apply resin to any dry spots
18	apply final layer of 1 1/2 oz. mat (P/N 751022), on both sides of lateral baffle, at a minimum of 2" on each side of tie in. Apply Vinylester resin #7775 (P/N751034) catalyzed at 2% per volume using MEKP Hi-point 90 catalyst with a brush. Roll out to remove all air bubbles
19	Remove "bridge" and masking tape from top of clearance cup
20	Mix body filler with harder
21	On the top surface of the outer perimeter of the clearance cup apply body filler to fill any voids. Allow to dry
22	Sand down repair kit starting with 180 grit sand paper and finishing with 600. Re-apply body filler and sand as required to a finish surface suitable for paint and primer.
23	Apply surfacing agent (type I sealant with pigment) to internal tank portion of clearance cup installation