CHAPTER

26

FIRE PROTECTION

CHAPTER 26
FIRE PROTECTION

Subject/Page	Date	COC
26-EFFECTIVE PAGES		
1 thru 8	Feb 15/2025	
26-CONTENTS		
1	Oct 15/2024	
2	Oct 15/2024	
3	Oct 15/2024	
4	Feb 15/2023	
5	Oct 15/2023	
6	Oct 15/2023	
7	Jun 15/2024	
8	Oct 15/2023	
9	Oct 15/2024	
10	Oct 15/2023	
11	Oct 15/2023	
12	Oct 15/2024	
13	Oct 15/2024	
14	Oct 15/2024	
26-00-00		
901	Oct 15/2024	
902	Feb 15/2023	
903	Oct 15/2024	
904	Feb 15/2024	
905	Oct 15/2024	
906	Oct 15/2024	
907	Oct 15/2024	
908	Oct 15/2024	
909	Oct 15/2024	
910	Oct 15/2024	
911	Oct 15/2024	
912	Oct 15/2024	
913	Oct 15/2024	
914	Oct 15/2024	
915	Oct 15/2024	
916	Oct 15/2024	
917	Oct 15/2024	
918	Oct 15/2024	
919	Oct 15/2024	
26-00-00 (cont)		
920	Oct 15/2024	
921	Oct 15/2024	
922	BLANK	
26-00-01		
401	Feb 15/2024	
402	Feb 15/2024	
403	Feb 15/2024	
404	Feb 15/2024	
405	Feb 15/2024	
406	Feb 15/2024	
407	Feb 15/2024	
408	Feb 15/2024	
409	Feb 15/2024	
410	Feb 15/2024	
411	Feb 15/2024	
412	Feb 15/2024	
413	Feb 15/2024	
414	Feb 15/2024	
415	Feb 15/2024	
416	Feb 15/2024	
417	Feb 15/2024	
418	BLANK	
26-00-02		
401	Oct 15/2024	
402	Feb 15/2024	
403	Oct 15/2015	
404	Oct 15/2024	
405	Oct 15/2024	
406	Feb 15/2024	
26-10-00		
501	Feb 15/2023	
502	Feb 15/2019	
503	Feb 15/2023	
504	Feb 15/2019	
505	Feb 15/2023	
506	Feb 15/2023	
507	Feb 15/2023	
26-10-00 (cont)		
508	Feb 15/2023	
509	Feb 15/2023	
510	Feb 15/2023	
511	Feb 15/2023	
512	Feb 15/2023	
513	Feb 15/2023	
514	Feb 15/2023	
515	Feb 15/2023	
516	Feb 15/2023	
517	Oct 15/2024	
518	Oct 15/2024	
519	Oct 15/2024	
520	Oct 15/2024	
521	Oct 15/2024	
522	Oct 15/2024	
523	Oct 15/2024	
524	Oct 15/2024	
525	Oct 15/2024	
526	Oct 15/2024	
527	Oct 15/2024	
528	Oct 15/2024	
529	Oct 15/2024	
530	BLANK	
26-10-01		
201	Feb 15/2015	
202	Oct 15/2015	
203	Oct 15/2015	
204	Feb 15/2015	
26-10-01		
401	Oct 15/2014	
402	Oct 15/2015	
403	Oct 15/2015	
404	Oct 15/2014	
26-11-00		
201	Feb 15/2015	
202	Feb 15/2015	
203	Oct 15/2015	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

26-EFFECTIVE PAGES

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CHAPTER 26
FIRE PROTECTION

Subject/Page	Date	COC
26-11-00 (cont)		
204	Feb 15/2015	
26-11-00		
501	Jun 15/2023	
502	Jun 15/2023	
503	Jun 15/2023	
504	Jun 15/2023	
505	Feb 15/2016	
506	Oct 15/2017	
507	Feb 15/2016	
508	Feb 15/2016	
509	Feb 15/2016	
510	Oct 15/2024	
511	Feb 15/2016	
512	Feb 15/2016	
513	Jun 15/2016	
514	Feb 15/2016	
515	Feb 15/2016	
516	BLANK	
26-11-01		
401	Oct 15/2022	
402	Oct 15/2022	
403	Oct 15/2022	
404	Oct 15/2022	
405	Oct 15/2022	
406	Oct 15/2022	
407	Oct 15/2022	
408	Oct 15/2022	
409	Feb 15/2024	
410	Oct 15/2022	
411	Oct 15/2022	
412	Oct 15/2022	
413	Oct 15/2022	
414	Oct 15/2024	
415	Oct 15/2024	
416	Oct 15/2024	
417	Oct 15/2022	
418	Oct 15/2022	
26-11-01 (cont)		
419	Oct 15/2022	
420	Oct 15/2022	
421	Oct 15/2022	
422	Oct 15/2022	
423	Oct 15/2022	
424	Oct 15/2022	
425	Jun 15/2023	
426	Oct 15/2022	
427	Oct 15/2022	
428	Oct 15/2022	
429	Oct 15/2022	
430	Oct 15/2024	
431	Oct 15/2022	
432	Oct 15/2022	
433	Oct 15/2022	
434	Jun 15/2023	
R 435	Feb 15/2025	
R 436	Feb 15/2025	
R 437	Feb 15/2025	
R 438	Feb 15/2025	
439	Oct 15/2022	
440	BLANK	
26-11-01		
601	Oct 15/2023	
602	Oct 15/2023	
603	Feb 15/2022	
604	Feb 15/2022	
605	Feb 15/2022	
606	Feb 15/2022	
607	Feb 15/2022	
608	Feb 15/2022	
26-11-02		
401	Feb 15/2023	
402	Feb 15/2023	
403	Feb 15/2023	
404	Feb 15/2023	
405	Feb 15/2023	
26-11-02 (cont)		
406	Feb 15/2023	
407	Feb 15/2023	
408	Feb 15/2023	
409	Jun 15/2023	
410	Feb 15/2023	
411	Feb 15/2024	
412	Jun 15/2024	
413	Jun 15/2024	
R 414	Feb 15/2025	
R 415	Feb 15/2025	
O 416	Feb 15/2025	
O 417	Feb 15/2025	
418	Feb 15/2023	
419	Feb 15/2023	
420	Feb 15/2023	
421	Feb 15/2023	
422	Feb 15/2023	
423	Feb 15/2023	
424	Feb 15/2023	
425	Feb 15/2023	
426	Feb 15/2023	
427	Feb 15/2023	
428	Feb 15/2023	
429	Feb 15/2023	
430	Feb 15/2023	
431	Feb 15/2023	
432	Feb 15/2023	
433	Feb 15/2023	
434	Feb 15/2023	
435	Feb 15/2023	
436	Feb 15/2023	
437	Feb 15/2023	
438	Feb 15/2023	
R 439	Feb 15/2025	
440	Feb 15/2023	
441	Feb 15/2023	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

26-EFFECTIVE PAGES

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Subject/Page	Date	COC
26-11-02 (cont)		
442	Feb 15/2023	
R 443	Feb 15/2025	
444	Feb 15/2023	
445	Feb 15/2023	
446	Feb 15/2023	
447	Feb 15/2023	
448	Feb 15/2023	
449	Feb 15/2023	
450	Feb 15/2023	
451	Feb 15/2023	
452	Feb 15/2023	
453	Feb 15/2023	
454	Feb 15/2023	
455	Feb 15/2023	
456	Feb 15/2023	
457	Oct 15/2024	
458	Oct 15/2024	
459	Oct 15/2024	
460	Feb 15/2023	
R 461	Feb 15/2025	
R 462	Feb 15/2025	
O 463	Feb 15/2025	
O 464	Feb 15/2025	
R 465	Feb 15/2025	
R 466	Feb 15/2025	
R 467	Feb 15/2025	
R 468	Feb 15/2025	
R 469	Feb 15/2025	
O 470	Feb 15/2025	
O 471	Feb 15/2025	
O 472	Feb 15/2025	
A 473	Feb 15/2025	
A 474	BLANK	
26-11-02		
801	Feb 15/2023	
802	Oct 15/2024	
26-11-02 (cont)		
803	Feb 15/2023	
804	Feb 15/2023	
805	Feb 15/2023	
806	Feb 15/2023	
807	Feb 15/2023	
808	Feb 15/2023	
809	Feb 15/2023	
810	Feb 15/2023	
811	Feb 15/2023	
812	Feb 15/2023	
813	Feb 15/2023	
814	Feb 15/2023	
815	Feb 15/2019	
816	Feb 15/2019	
817	Feb 15/2019	
818	Feb 15/2019	
819	Feb 15/2019	
820	Feb 15/2019	
821	Feb 15/2019	
822	Feb 15/2019	
823	Feb 15/2019	
824	Feb 15/2019	
26-14-00		
501	Oct 15/2023	
502	Oct 15/2024	
503	Oct 15/2023	
504	Oct 15/2023	
505	Oct 15/2023	
506	Oct 15/2023	
507	Oct 15/2023	
508	Oct 15/2023	
509	Oct 15/2023	
510	Oct 15/2024	
511	Jun 15/2024	
512	Oct 15/2023	
513	Oct 15/2023	
26-14-00 (cont)		
514	Oct 15/2023	
26-14-01		
R 401	Feb 15/2025	
402	Oct 15/2021	
403	Oct 15/2021	
404	Oct 15/2021	
405	Feb 15/2021	
406	Oct 15/2022	
R 407	Feb 15/2025	
408	Oct 15/2023	
409	Oct 15/2023	
410	BLANK	
26-14-01		
701	Jun 15/2023	
702	Jun 15/2023	
703	Jun 15/2023	
704	Feb 15/2021	
705	Oct 15/2020	
706	Oct 15/2023	
707	Feb 15/2024	
708	Feb 15/2024	
709	Oct 15/2023	
710	Oct 15/2023	
711	Oct 15/2023	
712	Oct 15/2023	
713	Oct 15/2023	
714	BLANK	
26-15-00		
201	Oct 15/2022	
202	Oct 15/2022	
203	Oct 15/2015	
204	Oct 15/2015	
205	Oct 15/2022	
206	BLANK	
26-15-00		
501	Jun 15/2018	
502	Jun 15/2016	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

26-EFFECTIVE PAGES

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Subject/Page	Date	COC
26-15-00 (cont)		
503	Jun 15/2016	
504	Jun 15/2018	
505	Oct 15/2015	
506	Oct 15/2015	
507	Oct 15/2017	
508	Feb 15/2015	
509	Feb 15/2015	
510	Oct 15/2015	
511	Oct 15/2024	
512	Oct 15/2017	
513	Oct 15/2017	
514	Oct 15/2017	
515	Oct 15/2015	
516	Oct 15/2015	
517	Oct 15/2015	
518	BLANK	
26-15-01		
R 401	Feb 15/2025	
R 402	Feb 15/2025	
403	Oct 15/2015	
404	Oct 15/2015	
405	Oct 15/2015	
R 406	Feb 15/2025	
R 407	Feb 15/2025	
R 408	Feb 15/2025	
R 409	Feb 15/2025	
410	Feb 15/2019	
411	Feb 15/2019	
412	Jun 15/2023	
413	Feb 15/2023	
414	Feb 15/2023	
26-15-01		
601	Oct 15/2014	
602	BLANK	
26-15-02		
401	Jun 15/2024	
402	Jun 15/2024	
26-15-02 (cont)		
403	Jun 15/2024	
404	Jun 15/2024	
405	Jun 15/2024	
406	BLANK	
26-16-00		
201	Feb 15/2015	
202	Feb 15/2019	
203	Feb 15/2015	
204	BLANK	
26-16-00		
501	Jun 15/2022	
502	Jun 15/2022	
503	Jun 15/2022	
504	Feb 15/2019	
505	Feb 15/2016	
506	Feb 15/2019	
507	Oct 15/2024	
508	Feb 15/2019	
26-16-01		
401	Oct 15/2022	
402	Oct 15/2024	
403	Oct 15/2021	
404	Oct 15/2021	
405	Oct 15/2021	
406	Oct 15/2024	
407	Oct 15/2024	
408	Oct 15/2021	
409	Oct 15/2021	
410	Oct 15/2024	
411	Oct 15/2024	
412	BLANK	
26-16-01		
701	Jun 15/2022	
702	Feb 15/2022	
703	Feb 15/2022	
704	Feb 15/2022	
705	Oct 15/2023	
26-16-01 (cont)		
706	BLANK	
26-16-02		
401	Oct 15/2022	
402	Jun 15/2018	
403	Feb 15/2023	
404	Jun 15/2018	
405	Oct 15/2022	
406	Jun 15/2021	
26-18-00		
201	Feb 15/2017	
202	Feb 15/2017	
203	Oct 15/2015	
204	Feb 15/2017	
26-18-00		
501	Oct 15/2022	
502	Oct 15/2022	
503	Apr 15/2022	
504	Apr 15/2022	
505	Feb 15/2018	
506	Feb 15/2018	
507	Feb 15/2019	
508	Feb 15/2019	
26-18-01		
401	Oct 15/2014	
402	Feb 15/2018	
403	Feb 15/2019	
404	Feb 15/2019	
405	Feb 15/2022	
406	Feb 15/2018	
26-18-01		
501	Apr 15/2022	
502	Apr 15/2022	
503	Apr 15/2022	
504	Apr 15/2022	
505	Apr 15/2022	
506	Apr 15/2022	
507	Apr 15/2022	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

26-EFFECTIVE PAGES

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Subject/Page	Date	COC
26-18-01 (cont)		
508	Jun 15/2023	
509	Jun 15/2023	
510	Jun 15/2023	
511	Jun 15/2023	
512	Jun 15/2023	
26-18-02		
401	Jun 15/2024	
402	Jun 15/2024	
403	Jun 15/2024	
404	Jun 15/2024	
405	Jun 15/2024	
406	Jun 15/2024	
407	Oct 15/2024	
408	Jun 15/2024	
409	Jun 15/2024	
410	Oct 15/2024	
411	Oct 15/2024	
412	Oct 15/2024	
413	Oct 15/2024	
414	Oct 15/2023	
415	Oct 15/2023	
416	Oct 15/2023	
417	Oct 15/2023	
418	Oct 15/2023	
419	Oct 15/2024	
420	Oct 15/2024	
421	Oct 15/2024	
422	Oct 15/2024	
423	Oct 15/2024	
424	Oct 15/2024	
425	Oct 15/2023	
426	Oct 15/2024	
427	Oct 15/2023	
428	Oct 15/2023	
429	Oct 15/2024	
430	Oct 15/2024	
26-18-02 (cont)		
431	Oct 15/2024	
432	Oct 15/2024	
433	Oct 15/2024	
434	Oct 15/2024	
435	Oct 15/2024	
436	Oct 15/2024	
437	Oct 15/2024	
438	Oct 15/2024	
439	Oct 15/2024	
440	Oct 15/2024	
441	Oct 15/2024	
442	BLANK	
26-18-02		
501	Oct 15/2023	
502	Oct 15/2023	
503	Oct 15/2023	
504	Jun 15/2023	
505	Jun 15/2023	
506	Jun 15/2023	
507	Jun 15/2023	
508	Jun 15/2023	
509	Jun 15/2023	
510	Jun 15/2023	
511	Jun 15/2023	
512	BLANK	
26-20-00		
601	Feb 15/2023	
602	Feb 15/2023	
603	Feb 15/2017	
604	Feb 15/2017	
605	Oct 15/2017	
606	Jun 15/2024	
607	Feb 15/2023	
608	Feb 15/2017	
609	Oct 15/2017	
610	BLANK	
26-21-00		
201	Feb 15/2015	
202	Feb 15/2015	
203	Oct 15/2018	
204	Feb 15/2015	
205	Feb 15/2015	
206	BLANK	
26-21-00		
501	Feb 15/2019	
502	Jun 15/2024	
503	Jun 15/2024	
504	Jun 15/2024	
R 505	Feb 15/2025	
506	Jun 15/2024	
507	Feb 15/2019	
508	Oct 15/2022	
509	Oct 15/2018	
510	Feb 15/2022	
511	Feb 15/2022	
512	Oct 15/2024	
513	Oct 15/2024	
514	Feb 15/2022	
515	Feb 15/2022	
516	Feb 15/2022	
517	Jun 15/2019	
518	Jun 15/2019	
519	Jun 15/2019	
520	Jun 15/2019	
521	Oct 15/2023	
522	Oct 15/2023	
523	Oct 15/2023	
524	Oct 15/2023	
525	Oct 15/2023	
526	Jun 15/2019	
527	Jun 15/2019	
528	Jun 15/2019	
26-21-01		
401	Oct 15/2024	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

26-EFFECTIVE PAGES

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Subject/Page	Date	COC
26-21-01 (cont)		
402	Feb 15/2024	
R 403	Feb 15/2025	
404	Oct 15/2023	
405	Oct 15/2024	
406	Oct 15/2023	
407	Oct 15/2023	
408	Oct 15/2023	
409	Oct 15/2024	
R 410	Feb 15/2025	
411	Oct 15/2024	
R 412	Feb 15/2025	
413	Oct 15/2024	
R 414	Feb 15/2025	
415	Oct 15/2023	
416	BLANK	
26-21-01		
601	Oct 15/2017	
602	Oct 15/2017	
603	Oct 15/2015	
604	Oct 15/2015	
605	Oct 15/2015	
606	Oct 15/2015	
26-21-02		
401	Jun 15/2024	
402	Jun 15/2024	
403	Oct 15/2015	
404	Oct 15/2015	
405	Jun 15/2024	
406	Jun 15/2024	
R 407	Feb 15/2025	
408	Oct 15/2022	
26-22-00		
201	Feb 15/2015	
202	Feb 15/2015	
203	Oct 15/2018	
204	Feb 15/2015	
26-22-00		
501	Oct 15/2024	
502	Jun 15/2023	
503	Jun 15/2023	
504	Jun 15/2023	
505	Jun 15/2023	
R 506	Feb 15/2025	
R 507	Feb 15/2025	
508	Oct 15/2015	
509	Oct 15/2015	
R 510	Feb 15/2025	
R 511	Feb 15/2025	
R 512	Feb 15/2025	
R 513	Feb 15/2025	
R 514	Feb 15/2025	
515	Jun 15/2020	
516	BLANK	
26-22-01		
R 401	Feb 15/2025	
R 402	Feb 15/2025	
R 403	Feb 15/2025	
404	Oct 15/2023	
405	Feb 15/2024	
406	Jun 15/2024	
407	Oct 15/2024	
408	Jun 15/2024	
409	Jun 15/2024	
R 410	Feb 15/2025	
R 411	Feb 15/2025	
412	Jun 15/2024	
26-22-01		
601	Oct 15/2020	
602	Oct 15/2020	
26-22-02		
401	Jun 15/2024	
402	Jun 15/2024	
403	Oct 15/2015	
404	Oct 15/2024	
26-22-02 (cont)		
R 405	Feb 15/2025	
R 406	Feb 15/2025	
407	Jun 15/2024	
408	BLANK	
26-22-03		
401	Oct 15/2024	
402	Oct 15/2024	
403	Oct 15/2024	
404	Oct 15/2024	
405	Jun 15/2020	
406	Jun 15/2020	
407	Jun 15/2020	
408	Jun 15/2020	
409	Oct 15/2024	
410	Jun 15/2020	
26-22-03		
601	Jun 15/2015	
602	Oct 15/2024	
603	Oct 15/2024	
604	Oct 15/2015	
605	Oct 15/2015	
606	BLANK	
26-23-00		
201	Oct 15/2024	
202	Feb 15/2019	
203	Oct 15/2024	
204	BLANK	
26-23-00		
501	Oct 15/2024	
502	Feb 15/2023	
503	Feb 15/2023	
504	Feb 15/2023	
R 505	Feb 15/2025	
506	Oct 15/2024	
507	Feb 15/2019	
508	Feb 15/2019	
509	Oct 15/2019	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

26-EFFECTIVE PAGES

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CHAPTER 26
FIRE PROTECTION

Subject/Page	Date	COC
26-23-00 (cont)		
510	Oct 15/2019	
511	Oct 15/2019	
512	Oct 15/2019	
513	Oct 15/2019	
514	Oct 15/2019	
515	Oct 15/2024	
516	Oct 15/2024	
517	Oct 15/2024	
518	Oct 15/2024	
R 519	Feb 15/2025	
520	Oct 15/2024	
521	Oct 15/2024	
522	Oct 15/2024	
523	Oct 15/2024	
524	Oct 15/2024	
525	Oct 15/2024	
526	Oct 15/2024	
527	Oct 15/2024	
528	Oct 15/2024	
529	Oct 15/2024	
530	Oct 15/2024	
531	Oct 15/2024	
532	Oct 15/2024	
26-23-01		
401	Oct 15/2024	
R 402	Feb 15/2025	
403	Jun 15/2023	
404	Jun 15/2023	
405	Oct 15/2024	
406	Jun 15/2023	
407	Jun 15/2023	
408	Jun 15/2023	
409	Jun 15/2023	
410	Oct 15/2024	
411	Oct 15/2024	
R 412	Feb 15/2025	
26-23-01 (cont)		
R 413	Feb 15/2025	
R 414	Feb 15/2025	
R 415	Feb 15/2025	
R 416	Feb 15/2025	
R 417	Feb 15/2025	
R 418	Feb 15/2025	
R 419	Feb 15/2025	
R 420	Feb 15/2025	
R 421	Feb 15/2025	
R 422	Feb 15/2025	
26-23-01		
701	Oct 15/2024	
702	Oct 15/2017	
703	Oct 15/2024	
704	Oct 15/2015	
26-23-02		
401	Oct 15/2024	
402	Oct 15/2024	
403	Oct 15/2024	
404	Oct 15/2015	
405	Oct 15/2024	
406	Feb 15/2024	
407	Feb 15/2024	
408	Oct 15/2023	
409	Oct 15/2024	
R 410	Feb 15/2025	
411	Jun 15/2024	
412	BLANK	
26-23-04		
401	Oct 15/2024	
402	Oct 15/2024	
403	Oct 15/2024	
404	Oct 15/2024	
405	Oct 15/2024	
406	BLANK	
26-24-01		
201	Oct 15/2024	
202	Oct 15/2024	
203	Oct 15/2024	
204	Feb 15/2024	
205	Oct 15/2024	
206	Feb 15/2024	
207	Feb 15/2024	
208	Jun 15/2024	
209	Jun 15/2024	
210	BLANK	
26-24-01		
601	Feb 15/2024	
602	Oct 15/2024	
603	Oct 15/2024	
604	Feb 15/2024	
26-26-01		
401	Oct 15/2024	
402	Oct 15/2024	
403	Oct 15/2024	
404	Oct 15/2024	
26-26-01		
601	Oct 15/2024	
602	Oct 15/2024	
603	Oct 15/2024	
604	Oct 15/2024	
605	Oct 15/2024	
606	BLANK	
26-26-02		
401	Feb 15/2023	
402	Feb 15/2023	
403	Feb 15/2023	
404	BLANK	
26-26-02		
601	Jun 15/2024	
602	Oct 15/2024	
603	Oct 15/2022	
604	Feb 15/2023	

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

26-EFFECTIVE PAGES

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Subject/Page	Date	COC	Subject/Page	Date	COC	Subject/Page	Date	COC
26-26-02 (cont)								
605	Oct 15/2021							
606	BLANK							
26-26-05								
401	Feb 15/2023							
402	Feb 15/2023							
403	Feb 15/2023							
404	Jun 15/2023							
26-26-05								
601	Oct 15/2023							
602	Oct 15/2023							
603	Oct 15/2023							
604	Oct 15/2023							

A = Added, R = Revised, D = Deleted, O = Overflow, C = Customer Originated Change

26-EFFECTIVE PAGES

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CHAPTER 26
FIRE PROTECTION

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
FIRE PROTECTION - DDG MAINTENANCE PROCEDURES	26-00-00		901	LOM ALL
MMEL 26–3 (DDPG) Preparation - Portable Fire Extinguishers Inoperative TASK 26-00-00-040-813			902	LOM ALL
MMEL 26–3 (DDPG) Restoration - Portable Fire Extinguishers Inoperative TASK 26-00-00-440-812			902	LOM ALL
MMEL 26-4 (DDPG) Preparation - Wheel Well Fire Detection System Inoperative TASK 26-00-00-040-802			903	LOM ALL
MMEL 26-4 (DDPG) Restoration - Wheel Well Fire Detection System Inoperative TASK 26-00-00-440-802			904	LOM ALL
MMEL 26-9 (DDPG) Preparation - Engine/APU Fire Extinguisher Test System (EXT TEST) (Squib Test) Inoperative TASK 26-00-00-040-803			905	LOM ALL
MMEL 26-9 (DDPG) Restoration - Engine/APU Fire Extinguisher Test System (EXT TEST) (Squib Test) Inoperative TASK 26-00-00-040-804			907	LOM ALL
MMEL 26-15 (DDPG) Preparation - Lavatory Fire Extinguisher System Inoperative TASK 26-00-00-040-805			908	LOM ALL
MMEL 26-15 (DDPG) Restoration - Lavatory Fire Extinguisher System Inoperative TASK 26-00-00-440-803			908	LOM ALL
MMEL 26-16 (DDPG) Preparation - Lavatory Smoke Detector System Inoperative TASK 26-00-00-040-806			909	LOM ALL
MMEL 26-16 (DDPG) Restoration - Lavatory Smoke Detector System Inoperative TASK 26-00-00-440-804			909	LOM ALL
MMEL 26-16 (DDPG) Preparation - Lavatory Smoke Detector Test Switch Inoperative TASK 26-00-00-040-814			910	LOM ALL

26-CONTENTS

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
MMEL 26-16 (DDPG) Restoration - Lavatory Smoke Detector Test Switch Inoperative TASK 26-00-00-440-813			910	LOM ALL
MMEL 26-18 (DDPG) Preparation - Wing Body Overheat Test System Inoperative TASK 26-00-00-040-807			910	LOM ALL
MMEL 26-18 (DDPG) Restoration - Wing/Body Overheat Test System Inoperative TASK 26-00-00-440-805			911	LOM ALL
MMEL 26-19-02 (DDPG) Preparation - Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative TASK 26-00-00-040-808			912	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463
MMEL 26-19-02 (DDPG) Restoration - Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative TASK 26-00-00-440-806			914	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463
MMEL 26-19-04/-06 (DDPG) Preparation - Lower Cargo Compartment DISCH or EXT Light Inoperative TASK 26-00-00-040-809			915	LOM ALL
MMEL 26-19-04/-06 (DDPG) Restoration - Lower Cargo Compartment DISCH or EXT Light Inoperative TASK 26-00-00-440-811			918	LOM ALL
MMEL 26-19-05 (DDGP) Preparation - Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative TASK 26-00-00-040-810			919	LOM ALL
MMEL 26-19-05 (DDGP) Restoration - Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative TASK 26-00-00-440-808			920	LOM ALL
ENGINE AND APU FIRE CONTROL PANEL - REMOVAL/INSTALLATION	26-00-01		401	LOM ALL
Engine and APU Fire Control Panel Removal TASK 26-00-01-000-801			401	LOM ALL
Engine and APU Fire Control Panel Installation TASK 26-00-01-400-801			405	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
Engine and APU Fire Shutoff Switch Assembly Removal TASK 26-00-01-000-802			409	LOM ALL
Engine and APU Fire Shutoff Switch Assembly Installation TASK 26-00-01-400-802			414	LOM ALL
CARGO FIRE CONTROL PANEL - REMOVAL/INSTALLATION	26-00-02		401	LOM ALL
Cargo Fire Control Panel Removal TASK 26-00-02-000-801			401	LOM ALL
Cargo Fire Control Panel Installation TASK 26-00-02-400-801			404	LOM ALL
DETECTION - ADJUSTMENT/TEST	26-10-00		501	LOM ALL
Fire and Overheat Detection System - Operational Test TASK 26-10-00-710-801			501	LOM ALL
Overheat Detection Test Using Handheld LCRZ Meter TASK 26-10-00-700-801			517	LOM ALL
Overheat Detection Test Using UN-ATE by Technologies Harness Scanner TASK 26-10-00-700-802			523	LOM ALL
ENGINE AND APU FIRE DETECTION CONTROL MODULE, M279 - MAINTENANCE PRACTICES	26-10-01		201	LOM ALL
Engine and APU Fire Detection Control Module - Deactivation TASK 26-10-01-040-801			201	LOM ALL
Engine and APU Fire Detection Control Module - Activation TASK 26-10-01-440-801			204	LOM ALL
ENGINE AND APU FIRE DETECTION CONTROL MODULE, M279 - REMOVAL/INSTALLATION	26-10-01		401	LOM ALL
Engine and APU Fire Detection Module Removal TASK 26-10-01-000-801			401	LOM ALL
Engine and APU Fire Detection Module Installation TASK 26-10-01-400-801			404	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CHAPTER 26
FIRE PROTECTION

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
ENGINE FIRE DETECTION - MAINTENANCE PRACTICES	26-11-00		201	LOM ALL
Engine Fire Detection - Deactivation TASK 26-11-00-040-801			201	LOM ALL
Engine Fire Detection - Activation TASK 26-11-00-440-801			204	LOM ALL
ENGINE FIRE DETECTION - ADJUSTMENT/TEST	26-11-00		501	LOM ALL
Engine Fire Detection - Operational Test TASK 26-11-00-710-801			501	LOM ALL
Engine Fire Detection Loop Resistance - System Test TASK 26-11-00-730-801			506	LOM ALL
Engine Fire Detection Circuit - System Test TASK 26-11-00-730-802			510	LOM ALL
ENGINE FIRE DETECTORS - REMOVAL/INSTALLATION	26-11-01		401	LOM ALL
Engine Fire Detector Element Removal TASK 26-11-01-000-801			401	LOM ALL
Engine Fire Detector Element Installation TASK 26-11-01-400-801			425	LOM ALL
Engine Fire Detector Assembly Removal TASK 26-11-01-000-802			432	LOM ALL
Engine Fire Detector Assembly Installation TASK 26-11-01-400-802			434	LOM ALL
ENGINE FIRE DETECTORS - INSPECTION/CHECK	26-11-01		601	LOM ALL
Engine Fire Detector Inspection TASK 26-11-01-211-801			601	LOM ALL
ENGINE FIRE DETECTOR HARNESS - REMOVAL/INSTALLATION	26-11-02		401	LOM ALL
Fan Fire Detection Harness Removal TASK 26-11-02-000-801			401	LOM ALL
Fan Fire Detection Harness Installation TASK 26-11-02-400-801			409	LOM ALL
Core Fire Detection Harnesses - Removal TASK 26-11-02-000-802			412	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CHAPTER 26
FIRE PROTECTION

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
Core Fire Detection Harness - Installation TASK 26-11-02-400-802			461	LOM ALL
ENGINE FIRE DETECTOR HARNESS - REPAIRS	26-11-02		801	LOM ALL
Fan and Core Fire Detection Wire Harness Terminal Lugs and Ground Lug Replacement (Engines PRE CFM SB 72-0258 for core harnesses) TASK 26-11-02-960-801			801	LOM ALL PRE SB 737-CFM56-7B-72-0258; AIRPLANES WITH FAN FIRE DETECTION WIRE HARNESS
Core Fire Detection Wire Harness Terminal Lugs Replacement (Engines POST CFM SB 72-0258 or SB 72-0269) TASK 26-11-02-960-802			815	LOM ALL POST SB 737-CFM56-7B-72-0258
LAVATORY SMOKE DETECTION - ADJUSTMENT/TEST	26-14-00		501	LOM ALL
Lavatory Smoke Detection - Self Test TASK 26-14-00-710-802			501	LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS
Lavatory Smoke Detection - Smoke Test TASK 26-14-00-730-801			502	LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS
Lavatory Smoke Detection - Smoke Test TASK 26-14-00-730-802			510	LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS
LAVATORY SMOKE DETECTOR - REMOVAL/INSTALLATION	26-14-01		401	LOM ALL
Lavatory Smoke Detector Removal TASK 26-14-01-000-801			401	LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS
Lavatory Smoke Detector Removal (Kidde) TASK 26-14-01-000-802			405	LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS
Lavatory Smoke Detector Installation TASK 26-14-01-400-801			407	LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS
Lavatory Smoke Detector Installation (Kidde) TASK 26-14-01-400-802			408	LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS

26-CONTENTS

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CHAPTER 26
FIRE PROTECTION

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
LAVATORY SMOKE DETECTOR - CLEANING/PAINTING	26-14-01		701	LOM ALL
Lavatory Smoke Detector Cleaning TASK 26-14-01-100-801			701	LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS
Lavatory Smoke Detector Cleaning TASK 26-14-01-100-802			706	LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS
APU FIRE DETECTION - MAINTENANCE PRACTICES	26-15-00		201	LOM ALL
APU Fire Detection - Deactivation TASK 26-15-00-040-801			201	LOM ALL
APU Fire Detection - Activation TASK 26-15-00-440-801			205	LOM ALL
APU FIRE DETECTION - ADJUSTMENT/TEST	26-15-00		501	LOM ALL
APU Fire Detection - Operational Test TASK 26-15-00-710-801			501	LOM ALL
APU Fire Detection Loop Resistance - System Test TASK 26-15-00-730-801			507	LOM ALL
APU Fire Detection Circuit - System Test TASK 26-15-00-730-802			511	LOM ALL
APU OVERHEAT DETECTORS - REMOVAL/INSTALLATION	26-15-01		401	LOM ALL
APU Overheat Detector Element Removal TASK 26-15-01-000-801			401	LOM ALL
APU Overheat Detector Element Installation TASK 26-15-01-400-801			407	LOM ALL
APU Overheat Detector Assembly Removal TASK 26-15-01-000-802			410	LOM ALL
APU Overheat Detector Assembly Installation TASK 26-15-01-400-802			411	LOM ALL
APU FIRE DETECTORS - INSPECTION/CHECK	26-15-01		601	LOM ALL
APU Fire Detectors Inspection TASK 26-15-01-210-801			601	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CHAPTER 26
FIRE PROTECTION

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
APU FIRE WARNING HORN - REMOVAL/INSTALLATION	26-15-02		401	LOM ALL
APU Fire Warning Horn Removal TASK 26-15-02-000-801			401	LOM ALL
APU Fire Warning Horn Installation TASK 26-15-02-400-801			404	LOM ALL
CARGO BAY SMOKE DETECTION - MAINTENANCE PRACTICES	26-16-00		201	LOM ALL
Cargo Bay Smoke Detection - Deactivation TASK 26-16-00-040-801			201	LOM ALL
Cargo Bay Smoke Detection - Activation TASK 26-16-00-440-801			203	LOM ALL
CARGO BAY SMOKE DETECTION - ADJUSTMENT/TEST	26-16-00		501	LOM ALL
Cargo Bay Smoke Detection - Operational Test TASK 26-16-00-710-801			501	LOM ALL
Cargo Bay Smoke Detection - Smoke Test TASK 26-16-00-730-801			507	LOM ALL
CARGO BAY SMOKE DETECTOR - REMOVAL/INSTALLATION	26-16-01		401	LOM ALL
Cargo Bay Smoke Detector Removal TASK 26-16-01-000-801			401	LOM ALL
Cargo Bay Smoke Detector Installation TASK 26-16-01-400-801			410	LOM ALL
CARGO BAY SMOKE DETECTOR - CLEANING/PAINTING	26-16-01		701	LOM ALL
Cargo Bay Smoke Detector - Cleaning TASK 26-16-01-100-801			701	LOM ALL
CARGO ELECTRONIC UNIT - REMOVAL/INSTALLATION	26-16-02		401	LOM ALL
Cargo Electronic Unit Removal TASK 26-16-02-000-801			401	LOM ALL
Cargo Electronic Unit Installation TASK 26-16-02-400-801			405	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
Cargo Electronic Unit Installation Test TASK 26-16-02-710-801			406	LOM ALL
WHEEL WELL, WING AND LOWER AFT BODY OVERHEAT DETECTION SYSTEM - MAINTENANCE PRACTICES	26-18-00		201	LOM ALL
Wheel Well, Wing and Lower Aft Body Overheat Detection System - Deactivation TASK 26-18-00-040-801			201	LOM ALL
Wheel Well, Wing and Lower Aft Body Overheat Detection System - Activation TASK 26-18-00-440-801			204	LOM ALL
WHEEL WELL, WING AND LOWER AFT BODY OVERHEAT DETECTION SYSTEM - ADJUSTMENT/TEST	26-18-00		501	LOM ALL
Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test TASK 26-18-00-710-801			501	LOM ALL
COMPARTMENT OVERHEAT DETECTION CONTROL UNIT, M237 - REMOVAL/INSTALLATION	26-18-01		401	LOM ALL
Compartment Overheat Detection Control Unit Removal TASK 26-18-01-000-801			401	LOM ALL
Compartment Overheat Detection Control Unit Installation TASK 26-18-01-400-801			405	LOM ALL
COMPARTMENT OVERHEAT DETECTION CONTROL UNIT, M237 - ADJUSTMENT/TEST	26-18-01		501	LOM ALL
Compartment Overheat Detection Control Unit, M237 TASK 26-18-01-740-801			501	LOM ALL
Compartment Overheat System Automated Test with WiNMS Aero FLi Test Kit TASK 26-18-01-700-801			508	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CHAPTER 26
FIRE PROTECTION

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION	26-18-02		401	LOM ALL
Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal TASK 26-18-02-000-801			401	LOM ALL
Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation TASK 26-18-02-400-801			430	LOM ALL
WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - ADJUSTMENT/TEST	26-18-02		501	LOM ALL
Wing, Wheel Well and Lower Aft Body - Overheat Sensing Element Test TASK 26-18-02-720-803			501	LOM ALL
FIRE EXTINGUISHING BOTTLE PRESSURE GAUGE - INSPECTION/CHECK	26-20-00		601	LOM ALL
Engine Fire Extinguishing Bottle Check TASK 26-20-00-210-802			601	LOM ALL
APU Fire Extinguishing Bottle Check TASK 26-20-00-210-801			606	LOM ALL
ENGINE FIRE EXTINGUISHING - MAINTENANCE PRACTICES	26-21-00		201	LOM ALL
Engine Fire Extinguishing System - Deactivation TASK 26-21-00-040-801			201	LOM ALL
Engine Fire Extinguishing System - Activation TASK 26-21-00-440-801			204	LOM ALL
ENGINE FIRE EXTINGUISHING - ADJUSTMENT/TEST	26-21-00		501	LOM ALL
Engine Fire Extinguishing Bottle Squib - Circuit Test TASK 26-21-00-730-801			501	LOM ALL
Engine Fire Extinguishing Bottle Pressure Switch Circuit Test TASK 26-21-00-730-802			509	LOM ALL

26-CONTENTS

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
Engine Fire Extinguishing Discharge Line Flow Test TASK 26-21-00-720-801			510	LOM ALL
Engine Fire Extinguishing Discharge Line Pressure Test TASK 26-21-00-730-803			512	LOM ALL
Engine Fire Switch System Shutdown Test TASK 26-21-00-720-802			521	LOM ALL
ENGINE FIRE EXTINGUISHING BOTTLE - REMOVAL/INSTALLATION	26-21-01		401	LOM ALL
Engine Fire Extinguishing Bottle Removal TASK 26-21-01-000-801			401	LOM ALL
Engine Fire Extinguishing Bottle Installation TASK 26-21-01-400-801			408	LOM ALL
ENGINE FIRE EXTINGUISHING SYSTEM - INSPECTION/CHECK	26-21-01		601	LOM ALL
Engine Fire Extinguishing System Inspection TASK 26-21-01-210-801			601	LOM ALL
ENGINE FIRE EXTINGUISHER BOTTLE SQUIB - REMOVAL/INSTALLATION	26-21-02		401	LOM ALL
Engine Fire Extinguisher Bottle Squib Removal TASK 26-21-02-000-801			401	LOM ALL
Engine Fire Extinguisher Bottle Squib - Installation TASK 26-21-02-400-801			405	LOM ALL
APU FIRE EXTINGUISHING - MAINTENANCE PRACTICES	26-22-00		201	LOM ALL
APU Fire Extinguishing System - Deactivation TASK 26-22-00-040-801			201	LOM ALL
APU Fire Extinguishing System - Activation TASK 26-22-00-440-801			204	LOM ALL
APU FIRE EXTINGUISHING - ADJUSTMENT/TEST	26-22-00		501	LOM ALL
APU Fire Extinguishing Bottle Squib Circuit Test TASK 26-22-00-730-801			501	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CHAPTER 26
FIRE PROTECTION

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
APU Fire Extinguishing Bottle Pressure Switch Circuit Test TASK 26-22-00-730-802			510	LOM ALL
APU Fire Switch System Shutdown Test TASK 26-22-00-720-801			510	LOM ALL
APU FIRE EXTINGUISHING BOTTLE - REMOVAL/INSTALLATION	26-22-01		401	LOM ALL
APU Fire Extinguishing Bottle Removal TASK 26-22-01-000-801			401	LOM ALL
APU Fire Extinguishing Bottle Installation TASK 26-22-01-400-801			406	LOM ALL
APU FIRE BOTTLE - INSPECTION/CHECK	26-22-01		601	LOM ALL
APU Fire Bottle Inspection TASK 26-22-01-210-801			601	LOM ALL
APU FIRE EXTINGUISHING BOTTLE SQUIB - REMOVAL/INSTALLATION	26-22-02		401	LOM ALL
APU Fire Extinguishing Bottle Squib Removal TASK 26-22-02-000-801			401	LOM ALL
APU Fire Extinguishing Bottle Squib Installation TASK 26-22-02-400-801			404	LOM ALL
REMOTE APU CONTROL PANEL - REMOVAL/INSTALLATION	26-22-03		401	LOM ALL
Remote APU Control Panel Removal TASK 26-22-03-000-801			401	LOM ALL
Remote APU Control Panel Installation TASK 26-22-03-400-801			409	LOM ALL
REMOTE APU CONTROL PANEL - INSPECTION/CHECK	26-22-03		601	LOM ALL
Remote APU Control Panel TASK 26-22-03-210-801			601	LOM ALL
CARGO FIRE EXTINGUISHING - MAINTENANCE PRACTICES	26-23-00		201	LOM ALL
Cargo Compartment Fire Extinguishers and Squibs - Deactivation TASK 26-23-00-040-801			201	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
Cargo Compartment Fire Extinguishers and Squibs - Activation TASK 26-23-00-440-801			203	LOM ALL
CARGO FIRE EXTINGUISHING - ADJUSTMENT/TEST	26-23-00		501	LOM ALL
Cargo Fire Single Extinguishing Bottle Squib Circuit Test TASK 26-23-00-730-801			501	LOM 423, 424, 439, 441, 458-460, 464-999
Cargo Fire Single Extinguishing Bottle Pressure Switch Circuit Test TASK 26-23-00-730-802			509	LOM 423, 424, 439, 441, 458-460, 464-999
Cargo Fire Single Extinguishing Discharge Line Flow Test TASK 26-23-00-720-801			510	LOM 423, 424, 439, 441, 458-460, 464-999
Cargo Fire Single Extinguishing Discharge Line Pressure Test TASK 26-23-00-730-803			512	LOM 423, 424, 439, 441, 458-460, 464-999
Cargo Fire Dual Extinguishing Bottle Squib Circuit Test TASK 26-23-00-730-809			515	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463
Cargo Fire Dual Extinguishing Bottle Pressure Switch Circuit Test TASK 26-23-00-730-810			523	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463
Cargo Fire Dual Extinguishing Discharge Line Flow Test TASK 26-23-00-720-803			525	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463
Cargo Fire Dual Extinguishing Discharge Line Pressure Test TASK 26-23-00-730-811			528	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463
CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE - REMOVAL/INSTALLATION	26-23-01		401	LOM ALL
Cargo Fire Extinguisher Bottle Removal TASK 26-23-01-000-801-001			401	LOM ALL
Cargo Fire Extinguisher Bottle Installation TASK 26-23-01-400-802-001			411	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CHAPTER 26
FIRE PROTECTION

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
CARGO COMPARTMENT FIRE EXTINGUISHING SYSTEM - CLEANING/PAINTING	26-23-01		701	LOM ALL
Cargo Fire Extinguishing System Cleaning TASK 26-23-01-100-801			701	LOM ALL
CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE SQUIB - REMOVAL/INSTALLATION	26-23-02		401	LOM ALL
Cargo Fire Extinguisher Bottle Squib Removal TASK 26-23-02-000-801			401	LOM ALL
Cargo Fire Extinguisher Bottle Squib Installation TASK 26-23-02-400-801			408	LOM ALL
CARGO FIRE EXTINGUISHING FILTER/DRIER - REMOVAL/INSTALLATION	26-23-04		401	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463
Cargo Fire Extinguishing Filter/Drier Removal TASK 26-23-04-000-801			401	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463
Cargo Fire Extinguishing Filter/Drier Installation TASK 26-23-04-400-801			404	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463
LAVATORY WASTE COMPARTMENT FIRE EXTINGUISHING - MAINTENANCE PRACTICES	26-24-01		201	LOM ALL
Lavatory Waste Compartment Fire Extinguishing Bottle Removal/Installation TASK 26-24-01-900-801			201	LOM ALL
Lavatory Waste Compartment Fire Extinguishing Bottle Inspection/Check TASK 26-24-01-200-801			208	LOM ALL
LAVATORY WASTE COMPARTMENT - INSPECTION/CHECK	26-24-01		601	LOM ALL
Lavatory Waste Compartment Temperature Indicator Strip Inspection TASK 26-24-01-210-801			601	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CHAPTER 26
FIRE PROTECTION

SUBJECT	CHAPTER SECTION SUBJECT	CONF	PAGE	EFFECT
HALON FIRE EXTINGUISHERS - REMOVAL/INSTALLATION	26-26-01		401	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-465
Halon Fire Extinguisher Removal TASK 26-26-01-020-801			401	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-465
Halon Fire Extinguisher Installation TASK 26-26-01-430-801			404	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-465
HALON FIRE EXTINGUISHERS - INSPECTION/CHECK	26-26-01		601	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-465
Halon Fire Extinguishers - Inspection/Check TASK 26-26-01-200-801			601	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-465
WATER FIRE EXTINGUISHERS- REMOVAL/INSTALLATION	26-26-02		401	LOM ALL
Water Fire Extinguisher Removal TASK 26-26-02-000-801			401	LOM ALL
Water Fire Extinguisher Installation TASK 26-26-02-400-801			403	LOM ALL
WATER FIRE EXTINGUISHERS - INSPECTION/CHECK	26-26-02		601	LOM ALL
Water Fire Extinguishers - Inspection/Check TASK 26-26-02-200-801			601	LOM ALL
CLEAN AGENT FIRE EXTINGUISHERS - REMOVAL/INSTALLATION	26-26-05		401	LOM 466-999
Clean Agent Fire Extinguisher - Removal TASK 26-26-05-000-801			401	LOM 466-999
Clean Agent Fire Extinguisher - Installation TASK 26-26-05-400-801			404	LOM 466-999
CLEAN AGENT FIRE EXTINGUISHERS - INSPECTION/CHECK	26-26-05		601	LOM 466-999
Clean Agent Fire Extinguisher - Inspection TASK 26-26-05-200-801			601	LOM 466-999

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FIRE PROTECTION - DDG MAINTENANCE PROCEDURES

1. **General**

A. This procedure has maintenance tasks for the Master Minimum Equipment List (MMEL) maintenance requirements as shown in the Dispatch Deviations Procedures Guide (DDPG). These tasks are used to prepare the airplane for flight with certain systems/components inoperative.

B. This procedure also has the tasks that put the airplane back to its usual condition.

C. These are the tasks for the components in the fire protection system:

(1) MMEL 26-3 (DDPG) Preparation - Portable Fire Extinguishers Inoperative.

(2) MMEL 26-3 (DDPG) Restoration - Portable Fire Extinguishers Inoperative.

(3) MMEL 26-4 (DDPG) Preparation - Wheel Well Fire Detection System Inoperative.

(4) MMEL 26-4 (DDPG) Restoration - Wheel Well Fire Detection System Inoperative.

(5) MMEL 26-9 (DDPG) Preparation - Engine/APU Fire Extinguisher Test System (EXT TEST) (Squib Test) Inoperative.

(6) MMEL 26-9 (DDPG) Restoration - Engine/APU Fire Extinguisher Test System (EXT TEST) (Squib Test) Inoperative.

(7) MMEL 26-15 (DDPG) Preparation - Lavatory Fire Extinguisher System Inoperative.

(8) MMEL 26-15 (DDPG) Restoration - Lavatory Fire Extinguisher System Inoperative.

(9) MMEL 26-16 (DDPG) Preparation - Lavatory Smoke Detection System Inoperative.

(10) MMEL 26-16 (DDPG) Restoration - Lavatory Smoke Detection System Inoperative.

(11) MMEL 26-16 (DDPG) Preparation - Lavatory Smoke Detector Test Switch Inoperative

(12) MMEL 26-16 (DDPG) Restoration - Lavatory Smoke Detector Test Switch Inoperative

(13) MMEL 26-18 (DDPG) Preparation - Wing-Body Overheat Test System Inoperative.

(14) MMEL 26-18 (DDPG) Restoration - Wing-Body Overheat Test System Inoperative.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

(15) MMEL 26-19-02 (DDPG) Preparation - Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative.

(16) MMEL 26-19-02 (DDPG) Restoration - Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative.

LOM ALL

(17) MMEL 26-19-04/-06 (DDPG) Preparation - Lower Cargo Compartment DISCH or EXT Light Inoperative.

(18) MMEL 26-19-04/-06 (DDPG) Restoration - Lower Cargo Compartment DISCH or EXT Light Inoperative.

(19) MMEL 26-19-05 (DDPG) Preparation - Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative.

(20) MMEL 26-19-05 (DDPG) Restoration - Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-00-00-040-813

2. MMEL 26–3 (DDPG) Preparation - Portable Fire Extinguishers Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the inoperative Portable Fire Extinguishers.

B. References

Reference	Title
26-26-01-020-801	Halon Fire Extinguisher Removal (P/B 401)
26-26-02-000-801	Water Fire Extinguisher Removal (P/B 401)

C. Deactivation of Inoperative Portable Fire Extinguishers

SUBTASK 26-00-00-020-008

(1) Do the applicable task to remove the inoperative portable fire extinguisher: Halon Fire Extinguisher Removal, TASK 26-26-01-020-801 or Water Fire Extinguisher Removal, TASK 26-26-02-000-801.

SUBTASK 26-00-00-040-032

(2) Stow the extinguisher.

(a) Put the extinguisher in a bag

(b) Make sure that the extinguisher can not be used by mistake

NOTE: The extinguisher will be removed from the airplane at the next available maintenance base.

SUBTASK 26-00-00-610-001

(3) Make sure that the necessary supply of serviceable extinguishers is available during maintenance.

END OF TASK

TASK 26-00-00-440-812

3. MMEL 26–3 (DDPG) Restoration - Portable Fire Extinguishers Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the inoperative Portable Fire Extinguishers.

B. References

Reference	Title
26-26-01-430-801	Halon Fire Extinguisher Installation (P/B 401)
26-26-02-400-801	Water Fire Extinguisher Installation (P/B 401)

C. Reactivation of the Inoperative Portable Fire Extinguishers

SUBTASK 26-00-00-020-009

(1) Remove the inoperative extinguisher from the airplane.

SUBTASK 26-00-00-420-006

(2) Do the applicable task to install the new portable fire extinguisher Halon Fire Extinguisher Installation, TASK 26-26-01-430-801 or Water Fire Extinguisher Installation, TASK 26-26-02-400-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-00-00-040-802

4. MMEL 26-4 (DDPG) Preparation - Wheel Well Fire Detection System Inoperative

A. General

(1) This task gives the maintenance steps that prepare the airplane for flight with the Wheel Well Fire Detection System Inoperative.

B. References

Reference	Title
22-11-33-000-801	Flight Control Computer Removal (P/B 401)
22-11-33-400-801	Flight Control Computer Installation (P/B 401)
26-18-00-710-801	Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test (P/B 501)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Wheel Well Fire Detection System Deactivation

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-431, 433, 434, 439-444, 446, 447, 450-463, 465-999

SUBTASK 26-00-00-210-001

(1) Just prior to engine start, check that brakes are cool per accepted procedure.

LOM ALL

SUBTASK 26-00-00-740-001

(2) Deactivate the wheel well fire detection system, use one of the two methods.

SUBTASK 26-00-00-040-034

(3) Method 1: deactivate WHEEL WELL light and wheel well fire detection system input to fire warning system.

(a) Remove the two light bulbs from the WHEEL WELL light on the P8-1 panel.

1) Install an INOP - FIRE BELL DISCONNECTED placard on the light switch.

(b) Disconnect the fire bell, do these steps:

1) Remove Flight Control Computer (FCC) B to get access to the wiring for the fire bell (Flight Control Computer Removal, TASK 22-11-33-000-801).

2) Disconnect the wires from D742, pin 16 and pin 25 on the E1-4 shelf.

3) Cap and stow the wires.

4) Install the FCC B (Flight Control Computer Installation, TASK 22-11-33-400-801).

(c) Install a WHEEL WELL WARNING LIGHT AND BELL INOP placard on the captain's and first officer's FIRE WARN lights, on the P7 panel.

SUBTASK 26-00-00-040-035

(4) Method 2: deactivate the detection elements of the wheel well fire detection system.

(a) Disconnect the terminal lugs A and B or connectors on both sides of the M270 detection elements.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) Do this task: Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test, TASK 26-18-00-710-801.

1) Make sure that all tests pass except for the wheel well fire function with the disabled element.

(c) Stow the wiring and terminal lugs on either side of M270 detection elements.

——— END OF TASK ———

TASK 26-00-00-440-802

5. MMEL 26-4 (DDPG) Restoration - Wheel Well Fire Detection System Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Wheel Well Fire Detection Systems Inoperative.

B. References

Reference	Title
22-11-33-000-801	Flight Control Computer Removal (P/B 401)
22-11-33-400-801	Flight Control Computer Installation (P/B 401)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Wheel Well Fire Detection Systems Activation

SUBTASK 26-00-00-810-002

(1) Correct the fault.

(a) Find the fault code or description of the fault that occurred.

(b) Go to the applicable index or list in the FIM and find the FIM task number.

(c) Go to the task in the FIM and do the steps in the task.

SUBTASK 26-00-00-040-004

(2) Install the two light bulbs in the WHEEL WELL light on the P8-1 panel.

(a) Remove an INOP - FIRE BELL DISCONNECTED placard from the switch.

SUBTASK 26-00-00-010-008

(3) Remove Flight Control Computer - B to get access to the wiring for the fire bell (Flight Control Computer Removal, TASK 22-11-33-000-801).

SUBTASK 26-00-00-930-004

(4) Install the wires from D742, pin 16 and pin 25 on the E1-4 shelf.

(a) Remove the WHEEL WELL WARNING LIGHT AND BELL INOP placard from the captain's and first officer's FIRE WARN lights.

SUBTASK 26-00-00-410-007

(5) Install Flight Control Computer - B (Flight Control Computer Installation, TASK 22-11-33-400-801).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-00-00-420-007

(6) If it is necessary, install the terminal lugs A and B or connectors on both sides of the M270 detection elements.

——— END OF TASK ———

TASK 26-00-00-040-803

6. MMEL 26-9 (DDPG) Preparation - Engine/APU Fire Extinguisher Test System (EXT TEST) (Squib Test) Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the engine/APU squib test (EXT TEST switch) inoperative.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Engine/APU Extinguisher System (EXT TEST) (Squib Test) Deactivation

SUBTASK 26-00-00-760-001

WARNING USE THE CORRECT LAMP WHEN YOU MAKE THE SQUIB TESTER. IF YOU USE AN INCORRECT LAMP, THE HIGH ELECTRICAL CURRENT CAN CAUSE THE SQUIB TO FIRE. THIS WILL RELEASE THE EXTINGUISHING AGENT. INJURIES TO PERSONNEL CAN OCCUR.

(1) Prepare to do a test of the squib circuits:

(a) Make a squib test lamp with pigtail leads that end in pin contacts. Use only a 28 volt, 40 milliamp lamp in a applicable holder.

SUBTASK 26-00-00-040-036

(2) For the engines:

(a) Open these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

(b) Pull the engine 1 and engine 2 fire handles, on the P8-1 panel.

WARNING BE CAREFUL WHEN YOU OPEN THE P6-2 CIRCUIT BREAKER PANEL. THE P6-2 CIRCUIT BREAKER PANEL CONTAINS HIGH VOLTAGES AND CURRENTS THAT CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(c) Loosen the screws to lower the P6-2 circuit breaker panel.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WARNING MAKE SURE THAT ALL PERSONNEL ARE CLEAR OF THE ENGINES AND APU. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS.

(d) Connect the test lamp across the circuit breaker shown in the table below.

(e) Turn the applicable fire handle in the direction that is shown in the table.

1) Make sure that the lamp comes on for each position.

NOTE: If the lamp comes on, the squib is satisfactory.

Table 901/26-00-00-993-801

CIRCUIT BREAKER	FIRE HANDLE	DIRECTION
C296 FIRE PROTECTION EXTINGUISHERS LEFT	ENG 1 ENG 2	LEFT LEFT
C297 FIRE PROTECTION EXTINGUISHERS RIGHT	ENG 1 ENG 2	RIGHT RIGHT
C1021 FIRE PROTECTION EXTINGUISHERS ALTN LEFT	ENG 1 ENG 2	LEFT LEFT
C1022 FIRE PROTECTION EXTINGUISHERS ALTN RIGHT	ENG 1 ENG 2	RIGHT RIGHT

(f) Remove the test lamp after you do the check for all of the circuit breakers.

(g) Push the engine 1 and engine 2 fire handles, on the P8-1 panel, to the normal position.

(h) Close the P6-2 panel and install the screws.

(i) Close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

(3) For the APU:

(a) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

(b) Pull the APU fire handles on the P8-1 panel.

WARNING BE CAREFUL WHEN YOU OPEN THE P6-2 CIRCUIT BREAKER PANEL. THE P6-2 CIRCUIT BREAKER PANEL CONTAINS HIGH VOLTAGES AND CURRENTS THAT CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(c) Loosen the screws to lower the P6-2 circuit breaker panel.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WARNING MAKE SURE THAT ALL PERSONNEL ARE CLEAR OF THE ENGINES AND APU. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS.

(d) Connect the test lamp across the circuit breaker shown in the table below.

(e) Turn the applicable fire handle in the direction that is shown in the table.

1) Make sure that the lamp comes on for each position.

NOTE: If the lamp comes on, the squib is satisfactory.

Table 902/26-00-00-993-802

CIRCUIT BREAKER	FIRE HANDLE	DIRECTION
C452 FIRE PROTECTION EXTINGUISHERS APU	APU APU	LEFT RIGHT

(f) Remove the test lamp after you do the check for the circuit breaker.

(g) Push the APU fire handles, on the P8-1 panel, to the normal position.

(h) Close the P6-2 panel and install the screws.

(i) Close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-00-00-930-005

(4) Install a TEST INOP placard on the EXT TEST switch, on the P8-1 panel.

END OF TASK

TASK 26-00-00-040-804

7. MMEL 26-9 (DDPG) Restoration - Engine/APU Fire Extinguisher Test System (EXT TEST) (Squib Test) Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Engine/APU Squib Test (EXT TEST switch) Inoperative.

B. References

Reference	Title
26-10-00-710-801	Fire and Overheat Detection System - Operational Test (P/B 501)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Engine/APU Extinguisher System (EXT TEST) (Squib Test) Activation

SUBTASK 26-00-00-810-003

(1) Correct the fault.

(a) Find the fault code or description of the fault that occurred.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) Go to the applicable index or list in the FIM and find the FIM task number.

(c) Go to the task in the FIM and do the steps in the task.

SUBTASK 26-00-00-710-002

(2) Do this task: Fire and Overheat Detection System - Operational Test, TASK 26-10-00-710-801.

SUBTASK 26-00-00-930-006

(3) Remove the TEST INOP placard from the EXT TEST switch, on the P8-1 panel.

END OF TASK

TASK 26-00-00-040-805

8. MMEL 26-15 (DDPG) Preparation - Lavatory Fire Extinguisher System Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Lavatory Fire Extinguisher System inoperative.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Lavatory Deactivation

SUBTASK 26-00-00-040-006

(1) If the Lavatory Smoke Detector operates, do this step.

(a) Install INOP placard on the fire extinguisher bottle.

SUBTASK 26-00-00-040-007

(2) If the Lavatory Smoke Detector does not operate, do these steps.

(a) Empty the lavatory waste receptacle.

(b) Close and lock the lavatory door.

(c) Install an INOPERATIVE - DO NOT ENTER placard on the lavatory door.

END OF TASK

TASK 26-00-00-440-803

9. MMEL 26-15 (DDPG) Restoration - Lavatory Fire Extinguisher System Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Lavatory Fire Extinguisher System Inoperative.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Lavatory Fire Extinguisher System Activation

SUBTASK 26-00-00-810-004

(1) Replace the Fire Extinguisher bottle.

SUBTASK 26-00-00-040-008

(2) Remove the INOP placards from the Fire Bottle, and lavatory door.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-00-00-040-806

10. MMEL 26-16 (DDPG) Preparation - Lavatory Smoke Detector System Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Lavatory Smoke Detector System inoperative.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Lavatory Deactivation

SUBTASK 26-00-00-040-010

(1) Do the following steps:

(a) Empty the lavatory waste receptacle.

(b) If necessary, disconnect the smoke detector.

1) Open the applicable LAVATORY SMOKE Circuit Breaker (CB).

a) Lock with a DO NOT CLOSE tag.

2) Remove the smoke detector.

3) Disconnect, cap and stow the electrical connector from the smoke detector.

4) Install the smoke detector.

5) Close the applicable LAVATORY SMOKE CB.

(c) Close and lock the lavatory door.

(d) Install an INOPERATIVE - DO NOT ENTER placard on the lavatory door.

END OF TASK

TASK 26-00-00-440-804

11. MMEL 26-16 (DDPG) Restoration - Lavatory Smoke Detector System Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Lavatory Smoke Detector System Inoperative.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Lavatory Smoke Detector System Activation

SUBTASK 26-00-00-810-005

(1) Correct the fault.

(a) Find the fault code or description of the fault that occurred.

(b) Go to the applicable index or list in the FIM and find the FIM task number.

(c) Go to the task in the FIM and do the steps in the task.

SUBTASK 26-00-00-040-011

(2) Remove the INOP placard from the lavatory door.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-00-00-040-814

12. MMEL 26-16 (DDPG) Preparation - Lavatory Smoke Detector Test Switch Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Lavatory Smoke Detector Test Switch inoperative.

NOTE: This procedure is applicable to the inoperable SELF TEST switch, on the smoke detector, or the TEST switch, on the Flight Attendant's Panel.

B. References

Reference	Title
26-14-00-730-801	Lavatory Smoke Detection - Smoke Test (P/B 501)
26-14-00-730-802	Lavatory Smoke Detection - Smoke Test (P/B 501)

C. Lavatory Smoke Detector Deactivation

SUBTASK 26-00-00-040-033

(1) For each smoke detector, do the lavatory smoke detection system test (Lavatory Smoke Detection - Smoke Test, TASK 26-14-00-730-801 or Lavatory Smoke Detection - Smoke Test, TASK 26-14-00-730-802).

(a) The test switch may be inoperative provided that each lavatory smoke detector is verified to pass the smoke test.

——— END OF TASK ———

TASK 26-00-00-440-813

13. MMEL 26-16 (DDPG) Restoration - Lavatory Smoke Detector Test Switch Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with a Lavatory Smoke Detector Test Switch inoperative.

NOTE: This procedure is applicable to the inoperable SELF TEST switch, on the smoke detector, or the TEST switch, on the Flight Attendant's Panel.

B. References

Reference	Title
26-14-01 P/B 401	LAVATORY SMOKE DETECTOR - REMOVAL/INSTALLATION

C. Lavatory Smoke Detector Activation

SUBTASK 26-00-00-400-001

(1) Replace the lavatory smoke detector (PAGEBLOCK 26-14-01/401).

——— END OF TASK ———

TASK 26-00-00-040-807

14. MMEL 26-18 (DDPG) Preparation - Wing Body Overheat Test System Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Wing Body Overheat Test System inoperative.

B. Location Zones

Zone	Area
131	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Left

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Zone	Area
132	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Check the Wing-Body Overheat Test System

SUBTASK 26-00-00-040-012

(1) Apply heat from an appropriate heat source to an operable detector element in the left wing-body overheat detection system and in the right wing-body overheat detection system.

NOTE: The substitute test heat device must not produce heat greater than 450°F (232°C). This temperature limit should be observed in event fuel vapors exist in the area.

SUBTASK 26-00-00-040-028

(2) When a detector element in the left system is heated, observe that these lights come on:

(a) Left WING-BODY OVERHEAT light on the Air Conditioning Panel (P5).

(b) The AIR COND light on the glareshield P7.

(c) The MASTER CAUTION lights.

SUBTASK 26-00-00-040-029

(3) When a detector element in the right system is heated, observe that these lights come on:

(a) Right WING-BODY OVERHEAT light on the Air Conditioning Panel (P5).

(b) The AIR COND light on the glareshield P7.

(c) The MASTER CAUTION lights.

END OF TASK

TASK 26-00-00-440-805

15. MMEL 26-18 (DDPG) Restoration - Wing/Body Overheat Test System Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Wing/Body Overheat Test Systems Inoperative.

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Wing/Body Overheat Test Systems Activation

SUBTASK 26-00-00-810-006

(1) Correct the fault.

(a) Find the fault code or description of the fault that occurred.

(b) Go to the applicable index or list in the FIM and find the FIM task number.

(c) Go to the task in the FIM and do the steps in the task.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-00-00-040-013

(2) Remove the TEST SWITCH INOP placard from the OVHT TEST switch on the Air Conditioning Panel, P5-10.

——— END OF TASK ———

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

TASK 26-00-00-040-808

16. MMEL 26-19-02 (DDPG) Preparation - Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative

A. General

(1) This task gives the maintenance steps that prepare the airplane for flight with the Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative.

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Access Panels

Number	Name/Location
821	Forward Cargo Door

E. Lower Cargo Compartment Extinguisher Bottle No. 2 Deactivation

SUBTASK 26-00-00-860-001

(1) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2

SUBTASK 26-00-00-010-002

(2) Open this access panel:

Number	Name/Location
821	Forward Cargo Door

(a) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-00-00-040-024

(3) Do the steps that follow to deactivate Extinguisher Bottle No. 2 and prevent anomalies in the indication of the DISCH light during operation and the EXT FWD and EXT AFT lights during the system test:

NOTE: The steps that follow are only applicable to the Boeing System. For systems installed by STC, see the STC holder.

SUBTASK 26-00-00-020-001

WARNING DO NOT TOUCH THE PINS ON THE SQUIB. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Disconnect the electrical connectors from the bottle.

(a) Before you touch the squibs, do the procedure for devices that are sensitive to electrostatic discharge, these are the tasks:

- ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
- ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

(b) Disconnect, cap, and stow electrical connector D12816 on the Extinguisher Bottle No. 2 pressure switch.

(c) Disconnect electrical connectors D12820 and D12818 from the Extinguisher Bottle No. 2 squibs.

WARNING PUT A PROTECTIVE COVER ON THE BOTTLE SQUIB. IF YOU DO NOT PUT A PROTECTIVE COVER ON THE SQUIB, THE FIRE EXTINGUISHING BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

(d) Install a jumper across pins 1 and 2 on the electrical connectors D12820 and D12818.

(e) Cap and stow the connectors.

SUBTASK 26-00-00-410-002

(5) Close this access panel:

Number	Name/Location
821	Forward Cargo Door

(a) Install the lining at the aft end of the forward cargo compartment (at the air conditioning distribution bay).

SUBTASK 26-00-00-930-013

(6) Do the step that follow to INOP the Fire Extinguisher Bottle No. 2:

(a) Install the Fire Bottle No. 2 INOP Placard on the Cargo Fire Panel (P8).

SUBTASK 26-00-00-860-002

(7) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2

ECCN 9E991 BOEING PROPRIETARY - See title page for details

——— END OF TASK ———

TASK 26-00-00-440-806

17. **MMEL 26-19-02 (DDPG) Restoration - Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative**

A. **General**

(1) This task puts the airplane back to its usual condition after operation with the Lower Cargo Compartment Extinguisher Bottle No. 2 Inoperative.

B. **Location Zones**

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. **Access Panels**

Number	Name/Location
821	Forward Cargo Door

D. **Lower Cargo Compartment Extinguisher Bottle No. 2 Activation**

SUBTASK 26-00-00-860-003

(1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2

SUBTASK 26-00-00-010-003

(2) Open this access panel:

Number	Name/Location
821	Forward Cargo Door

(3) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-00-00-800-001

(4) Do the steps that follow to Activate the Extinguisher Bottle No. 2 System:

(a) Remove the cap, and stowed electrical connector D12816, D12820 and D12818.

(b) Remove the jumper across pins 1 and 2 on the connectors D12820 and D12818.

(c) Remove the protective cap installed on the Bottle Squib.

SUBTASK 26-00-00-420-004

WARNING DO NOT TOUCH THE PINS ON THE SQUIB. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463 (Continued)

(WARNING PRECEDES)

> **WARNING** MAKE SURE THAT THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN RELEASE THE CONTENTS OF THE BOTTLE SUDDENLY. THIS CAN CAUSE INJURIES TO PERSONNEL.

(5) Connect the electrical connectors to the Extinguisher Bottle.

(a) Connect the electrical connector D12816 on the Extinguisher Bottle No. 2 pressure switch.

(b) Connect electrical connectors D12820 and D12818 on the Extinguisher Bottle No. 2 squibs

SUBTASK 26-00-00-410-003

(6) Install the liner at the aft end of the forward cargo compartment to the air conditioning distribution bay.

Close this access panel:

Number	Name/Location
821	Forward Cargo Door

SUBTASK 26-00-00-930-018

(7) Do the step that follow to Activate the Fire Extinguisher No. 2 :

(a) Remove the Fire Extinguisher Bottle No. 2 INOP Placard on the Cargo Fire Panel.

SUBTASK 26-00-00-860-004

(8) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2

LOM ALL

END OF TASK

TASK 26-00-00-040-809

18. MMEL 26-19-04/-06 (DDPG) Preparation - Lower Cargo Compartment DISCH or EXT Light Inoperative

A. General

(1) This task gives the maintenance steps which prepare the airplane for flight with the Lower Cargo Compartment DISCH or EXT Light Inoperative.

B. References

Reference	Title
26-00-02-000-801	Cargo Fire Control Panel Removal (P/B 401)
26-00-02-400-801	Cargo Fire Control Panel Installation (P/B 401)

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Zone	Area
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Lower Cargo Compartment DISCH or EXT Light Deactivation

SUBTASK 26-00-00-010-007

(1) Do this task: Cargo Fire Control Panel Removal, TASK 26-00-02-000-801.

SUBTASK 26-00-00-020-005

(2) Do the steps that follow for an inoperative DISCH light circuit to make sure that the fire extinguisher bottles have an adequate charge:

NOTE: The steps that follow are only applicable to the Boeing System. For systems installed by STC, see the STC holder. You will need a 28VDC circuit test lamp, with pigtail leads that terminate in pin contacts in an applicable holder. To make the lamp, lamp P/N 116-565-1042-001 (28 volt, 40 milliamps) or the equivalent is suggested, but you can use an applicable lamp or a digital multimeter.

(a) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	17	C01526	CARGO FIRE EXT 1

(b) Connect the test lamp or digital multimeter between the airplane side of connector D12760, pin 48 (the +28 volt source for Bottle No. 1) and pin 28 (pressure switch ground).

(c) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	17	C01526	CARGO FIRE EXT 1

(d) If the test lamp stays OFF or the digital multimeter shows an OPEN circuit, the fire extinguisher bottle has an adequate charge.

(e) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	17	C01526	CARGO FIRE EXT 1

(f) Remove the test lamp.

(g) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	17	C01526	CARGO FIRE EXT 1

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

(h) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2

(i) Connect the test lamp or digital multimeter between the airplane side of connector D12760, pin 45 (the +28 volt source for Bottle No. 2) and pin 28 (pressure switch ground).

(j) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2

(k) If the test lamp stays OFF or the digital multimeter shows an OPEN circuit, the fire extinguisher bottle has an adequate charge.

(l) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2

(m) Remove the test lamp.

(n) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2

LOM ALL

SUBTASK 26-00-00-750-008

WARNING

KEEP PERSONNEL AWAY FROM THE EXTINGUISHER BOTTLE AREA DURING THE SQUIB CIRCUIT TEST. USE A MAXIMUM CURRENT OF 40 MILLIAMPS DURING THE TEST. USE ONLY TEST LAMP P/N 116-565-1042-001 (28 VOLT, 40 MILLIAMPS) OR ITS EQUIVALENT. DO NOT USE A MULTIMETER. IF THE EXTINGUISHER BOTTLE RELEASES THE EXTINGUISHING MATERIAL, IT CAN CAUSE INJURIES TO PERSONNEL.

(3) Do the steps that follow to make sure that the EXT light SQUIB circuit operates correctly:

NOTE: If the test lamp comes ON, the squib circuit is good.

(a) Connect the test lamp between D12760 pin 48 (the +28 volt source for Bottle No. 1) and pin 26 (EXT 1 FWD squib).

1) Make sure that the test lamp comes on.

(b) Connect the test lamp between D12760 pin 48 (the +28 volt source for Bottle No. 1) and pin 24 (EXT 1 AFT squib).

1) Make sure that the test lamp comes on.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

(c) Connect the test lamp between D12760 pin 45 (the +28 volt source for Bottle No. 2) and pin 12 (EXT 2 FWD squib).

1) Make sure that the test lamp comes on.

(d) Connect the test lamp between D12760 pin 45 (the +28 volt source for Bottle No. 2) and pin 23 (EXT 2 AFT squib).

1) Make sure that the test lamp comes on.

LOM ALL

(e) Remove the test lamp.

SUBTASK 26-00-00-410-004

(4) Do this task: Cargo Fire Control Panel Installation, TASK 26-00-02-400-801.

——— END OF TASK ———

TASK 26-00-00-440-811

19. MMEL 26-19-04/-06 (DDPG) Restoration - Lower Cargo Compartment DISCH or EXT Light Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Lower Cargo Compartment DISCH or EXT Light Inoperative.

B. References

Reference	Title
26-16-00-710-801	Cargo Bay Smoke Detection - Operational Test (P/B 501)
26-23-00-730-802	Cargo Fire Single Extinguishing Bottle Pressure Switch Circuit Test (P/B 501)
26-23-00-730-810	Cargo Fire Dual Extinguishing Bottle Pressure Switch Circuit Test (P/B 501)

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Lower Cargo Compartment DISCH or EXT Light Activation

SUBTASK 26-00-00-810-007

(1) Correct the fault.

(a) Find the fault code or description of the fault that occurred.

(b) Go to the applicable index or list in the FIM and find the FIM task number.

(c) Go to the task in the FIM and do the steps in the task.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-00-00-710-003

(2) Do this task for the DISCH light: Cargo Fire Single Extinguishing Bottle Pressure Switch Circuit Test, TASK 26-23-00-730-802 or Cargo Fire Dual Extinguishing Bottle Pressure Switch Circuit Test, TASK 26-23-00-730-810.

(3) Do this task for the EXT light: Cargo Bay Smoke Detection - Operational Test, TASK 26-16-00-710-801.

END OF TASK

TASK 26-00-00-040-810

20. MMEL 26-19-05 (DDGP) Preparation - Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative

A. General

(1) This task gives maintenance steps which prepare the airplane for flight with the Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative.

B. References

Reference	Title
26-23-01	CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE
26-23-01-000-801-001	Cargo Fire Extinguisher Bottle Removal (P/B 401)
26-23-01-400-802-001	Cargo Fire Extinguisher Bottle Installation (P/B 401)

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Lower Cargo Compartment Extinguisher Bottle Pressure Switch Deactivation

SUBTASK 26-00-00-020-003

WARNING DO NOT TOUCH THE PINS ON THE SQUIB. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Do the steps that follow to deactivate the applicable Extinguisher Bottle pressure switch:

(a) Do this task: Cargo Fire Extinguisher Bottle Removal, TASK 26-23-01-000-801-001

(b) Disconnect the electrical connectors from the Bottle.

(c) Cap and stow the bottle pressure switch, electrical connector.

SUBTASK 26-00-00-280-002

(2) Weigh the applicable Extinguisher Bottle on a scale that is accurate to within +/-0.1 lb (0.0 kg).

(a) Make sure that the bottle weight is within 0.25 lb (0.11 kg) of the service weight marked on the bottle name plate, refer to CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE, SUBJECT 26-23-01.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-00-00-420-005

(3) Do this task: Cargo Fire Extinguisher Bottle Installation, TASK 26-23-01-400-802-001.

SUBTASK 26-00-00-930-017

(4) Install the applicable Extinguisher Bottle pressure switch INOP Placard on the Cargo Fire Panel (P8).

——— END OF TASK ———

TASK 26-00-00-440-808

21. MMEL 26-19-05 (DDGP) Restoration - Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative

A. General

(1) This task puts the airplane back to its usual condition after operation with the Lower Cargo Compartment Extinguisher Bottle Pressure Switch Inoperative.

B. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Access Panels

Number	Name/Location
821	Forward Cargo Door

D. Lower Cargo Compartment Extinguisher Bottle Pressure Switch Activation

SUBTASK 26-00-00-860-019

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-00-00-010-006

(2) Open this access panel:

Number	Name/Location
821	Forward Cargo Door

(3) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-00-00-440-001

(4) Do the steps that follow to Activate the applicable Extinguisher Bottle, pressure switch:

(a) Remove the cap from the pressure switch, electrical connector.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) Connect the applicable Extinguisher Bottle, pressure switch electrical connector to the pressure switch.

SUBTASK 26-00-00-410-006

(5) Install the liner at the aft end of the forward cargo compartment to the air conditioning distribution bay.

Close this access panel:

Number	Name/Location
821	Forward Cargo Door

SUBTASK 26-00-00-930-012

(6) Remove the applicable Extinguisher Bottle pressure switch INOP Placard on the Cargo Fire Panel (P8).

SUBTASK 26-00-00-860-011

(7) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE AND APU FIRE CONTROL PANEL - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) Engine and APU Fire Control Panel Removal

(2) Engine and APU Fire Control Panel Installation

(3) Engine and APU Fire Shutoff Switch Assembly Removal

(4) Engine and APU Fire Shutoff Switch Assembly Installation.

B. The Engine and APU Fire Control Panel is installed on the P8 aisle control stand in the flight compartment.

TASK 26-00-01-000-801

2. Engine and APU Fire Control Panel Removal

(Figure 401)

A. General

(1) This task gives instructions to remove the Engine and Auxiliary Power Unit (APU) Fire Control Panel.

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Removal

SUBTASK 26-00-01-860-001

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	1	C01316	ENGINE 1 START LEVER CHAN A
B	2	C01317	ENGINE 1 START LEVER CHAN B
B	5	C00276	ENGINE 1 THRUST REVERSER CONT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	6	C01318	ENGINE 2 START LEVER CHAN A
B	7	C01319	ENGINE 2 START LEVER CHAN B
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L
C	7	C00277	ENGINE 2 THRUST REVERSER CONT
C	18	C00348	HYDRAULIC SYSTEM SHUTOFF VALVE ENG 2
C	19	C00347	HYDRAULIC SYSTEM SHUTOFF VALVE ENG 1

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	3	C00360	FUEL SPAR VALVE ENG 2
B	4	C00359	FUEL SPAR VALVE ENG 1
B	5	C00540	FUEL SPAR VALVE IND
C	10	C00284	PANEL & INSTR ELEX PANEL
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2
D	8	C00701	EMER PANEL LTG
E	3	C01321	ENGINE FUEL ENGINE 2 HPSOV CONT
E	4	C01396	ENGINE FUEL ENGINE 2 HPSOV IND
E	5	C01320	ENGINE FUEL ENGINE 1 HPSOV CONT
E	6	C01395	ENGINE FUEL ENGINE 1 HPSOV IND
E	11	C00313	INDICATOR MASTER DIM SECT 1
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6
F	13	C01179	INDICATOR MASTER DIM SECT 7
F	14	C01180	INDICATOR MASTER DIM SECT 8

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	5	C00259	AIR CONDITIONING BLEED AIR VALVE ISLN
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
A	14	C00033	AUX POWER UNIT CONT
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R
F	12	C01285	GENERATOR APU GEN CONT UNIT

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
C	9	C01326	APU GEN CONT UNIT

SUBTASK 26-00-01-860-004

(2) If it is necessary, set the engine fuel levers to IDLE to get access to remove the Engine and APU Fire Control Panel.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

E. Engine and APU Fire Control Panel Removal

SUBTASK 26-00-01-860-011

CAUTION	DO NOT TOUCH THE CONTROL UNIT BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE CONTROL UNIT.

(1) Before you touch the engine and APU fire control panel [1], do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

SUBTASK 26-00-01-020-001

(2) Loosen the four quarter turn fasteners that attach the engine and APU fire control panel [1] to the frame.

SUBTASK 26-00-01-020-002

(3) Slide the engine and APU fire control panel [1] from the frame.

SUBTASK 26-00-01-020-003

(4) Tag and remove the five electrical connectors.

SUBTASK 26-00-01-860-005

(5) Make sure the engine fuel levers switch to CUTOFF.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

ENGINE AND APU FIRE CONTROL PANEL (P8-1)

A

G20352 S0006567999_V3

Fire Control Panel Installation
Figure 401/26-00-01-990-801

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-00-01-400-801

3. Engine and APU Fire Control Panel Installation

(Figure 401)

A. General

(1) This task gives instructions to install the Engine and Auxiliary Power Unit (APU) Fire Control Panel.

B. References

Reference	Title
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
26-10-00-710-801	Fire and Overheat Detection System - Operational Test (P/B 501)
26-18-00-710-801	Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test (P/B 501)
26-21-00-720-802	Engine Fire Switch System Shutdown Test (P/B 501)
26-21-00-730-801	Engine Fire Extinguishing Bottle Squib - Circuit Test (P/B 501)
26-21-00-730-802	Engine Fire Extinguishing Bottle Pressure Switch Circuit Test (P/B 501)
26-22-00-720-801	APU Fire Switch System Shutdown Test (P/B 501)
26-22-00-730-801	APU Fire Extinguishing Bottle Squib Circuit Test (P/B 501)
26-22-00-730-802	APU Fire Extinguishing Bottle Pressure Switch Circuit Test (P/B 501)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Engine and APU fire control panel	26-00-01-03-005	LOM ALL
		26-21-51-03-050	LOM ALL

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the Installation

SUBTASK 26-00-01-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	3	C00360	FUEL SPAR VALVE ENG 2
B	4	C00359	FUEL SPAR VALVE ENG 1

SUBTASK 26-00-01-860-006

(2) If it is necessary, set the engine fuel levers to IDLE to get access to install the Engine and APU Fire Control Panel.

F. Engine and APU Fire Control Panel Installation

SUBTASK 26-00-01-860-012

CAUTION DO NOT TOUCH THE CONTROL UNIT BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE CONTROL UNIT.

(1) Before you touch the engine and APU fire control panel [1], do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 26-00-01-200-001

(2) Make sure that the pins are not bent or damaged and the connector is not damaged.

SUBTASK 26-00-01-420-001

(3) Install the five connectors in accordance with tag information and remove the tags.

SUBTASK 26-00-01-020-004

(4) Slide the engine and APU fire control panel [1] into the frame and secure with the four quarter turn fasteners.

SUBTASK 26-00-01-860-007

(5) Make sure the engine fuel levers switch to CUTOFF.

G. Engine and APU Fire Detection Control Unit Installation Test

SUBTASK 26-00-01-860-010

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	1	C01316	ENGINE 1 START LEVER CHAN A
B	2	C01317	ENGINE 1 START LEVER CHAN B
B	5	C00276	ENGINE 1 THRUST REVERSER CONT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	6	C01318	ENGINE 2 START LEVER CHAN A
B	7	C01319	ENGINE 2 START LEVER CHAN B
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L
C	7	C00277	ENGINE 2 THRUST REVERSER CONT
C	18	C00348	HYDRAULIC SYSTEM SHUTOFF VALVE ENG 2
C	19	C00347	HYDRAULIC SYSTEM SHUTOFF VALVE ENG 1

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	3	C00360	FUEL SPAR VALVE ENG 2
B	4	C00359	FUEL SPAR VALVE ENG 1
B	5	C00540	FUEL SPAR VALVE IND
C	10	C00284	PANEL & INSTR ELEX PANEL
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2
D	8	C00701	EMER PANEL LTG
E	3	C01321	ENGINE FUEL ENGINE 2 HPSOV CONT
E	4	C01396	ENGINE FUEL ENGINE 2 HPSOV IND
E	5	C01320	ENGINE FUEL ENGINE 1 HPSOV CONT
E	6	C01395	ENGINE FUEL ENGINE 1 HPSOV IND
E	11	C00313	INDICATOR MASTER DIM SECT 1
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6
F	13	C01179	INDICATOR MASTER DIM SECT 7
F	14	C01180	INDICATOR MASTER DIM SECT 8

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	5	C00259	AIR CONDITIONING BLEED AIR VALVE ISLN
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
A	14	C00033	AUX POWER UNIT CONT
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R
F	12	C01285	GENERATOR APU GEN CONT UNIT

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
C	9	C01326	APU GEN CONT UNIT

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-00-01-720-001

(2) Do this task: Fire and Overheat Detection System - Operational Test, TASK 26-10-00-710-801.

SUBTASK 26-00-01-720-002

(3) Do this task: Engine Fire Switch System Shutdown Test, TASK 26-21-00-720-802.

SUBTASK 26-00-01-710-001

(4) Do this task: Engine Fire Extinguishing Bottle Squib - Circuit Test, TASK 26-21-00-730-801.

SUBTASK 26-00-01-720-003

(5) Do this task: Engine Fire Extinguishing Bottle Pressure Switch Circuit Test, TASK 26-21-00-730-802.

SUBTASK 26-00-01-720-004

(6) Do this task: APU Fire Switch System Shutdown Test, TASK 26-22-00-720-801.

SUBTASK 26-00-01-720-005

(7) Do this task: APU Fire Extinguishing Bottle Squib Circuit Test, TASK 26-22-00-730-801.

SUBTASK 26-00-01-720-006

(8) Do this task: APU Fire Extinguishing Bottle Pressure Switch Circuit Test, TASK 26-22-00-730-802.

SUBTASK 26-00-01-710-002

(9) Do this task: Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test, TASK 26-18-00-710-801.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 26-00-01-860-008

(1) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	3	C00360	FUEL SPAR VALVE ENG 2
B	4	C00359	FUEL SPAR VALVE ENG 1

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-00-01-000-802

4. Engine and APU Fire Shutoff Switch Assembly Removal

(Figure 402)

A. General

(1) This task gives instructions to remove the Engine and Auxiliary Power Unit (APU) Fire Shutoff Switch Assembly.

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Removal

SUBTASK 26-00-01-865-001

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	1	C01316	ENGINE 1 START LEVER CHAN A
B	2	C01317	ENGINE 1 START LEVER CHAN B
B	5	C00276	ENGINE 1 THRUST REVERSER CONT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	6	C01318	ENGINE 2 START LEVER CHAN A
B	7	C01319	ENGINE 2 START LEVER CHAN B
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L
C	7	C00277	ENGINE 2 THRUST REVERSER CONT
C	18	C00348	HYDRAULIC SYSTEM SHUTOFF VALVE ENG 2
C	19	C00347	HYDRAULIC SYSTEM SHUTOFF VALVE ENG 1

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	5	C00540	FUEL SPAR VALVE IND
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	3	C01321	ENGINE FUEL ENGINE 2 HPSOV CONT
E	4	C01396	ENGINE FUEL ENGINE 2 HPSOV IND
E	5	C01320	ENGINE FUEL ENGINE 1 HPSOV CONT
E	6	C01395	ENGINE FUEL ENGINE 1 HPSOV IND
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6
F	13	C01179	INDICATOR MASTER DIM SECT 7
F	14	C01180	INDICATOR MASTER DIM SECT 8

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	5	C00259	AIR CONDITIONING BLEED AIR VALVE ISLN
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
A	14	C00033	AUX POWER UNIT CONT
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R
F	12	C01285	GENERATOR APU GEN CONT UNIT

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
C	9	C01326	APU GEN CONT UNIT

E. Engine and APU Fire Shutoff Switch Removal

SUBTASK 26-00-01-860-013

CAUTION DO NOT TOUCH THE CONTROL UNIT BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE CONTROL UNIT.

(1) Before you touch the engine and APU fire control panel [1], do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

SUBTASK 26-00-01-030-001

(2) Loosen the quarter turn fasteners securing the engine and APU fire control panel [1] to the frame.

SUBTASK 26-00-01-030-002

(3) Slide the engine and APU fire control panel [1] carefully from the frame insert, enough to gain access to the connectors of the engine and APU fire shutoff switches [8].

SUBTASK 26-00-01-030-003

(4) Disconnect the electrical connector from the applicable engine and APU fire shutoff switch [8].

SUBTASK 26-00-01-030-004

(5) Put a protective cover on the connector of the applicable engine and APU fire shutoff switch [8].

SUBTASK 26-00-01-010-002

(6) Remove the cover [9].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) Remove the screws [10] that attach the cover [9] to the engine and APU fire control panel [1].

SUBTASK 26-00-01-010-001

(7) If it is necessary, remove the lightplate [4].

(a) Remove the screws [6] that attach the lightplate [4] to the baseplate of the engine and APU fire control panel [1].

SUBTASK 26-00-01-010-003

(8) If it is necessary, remove the lightplate [5].

(a) Remove the bell cutout handle [2].

1) Remove the screws [3] that attach the bell cutout handle [2] to the switch rod.

(b) Remove the screws [6] that attach the lightplate [5] to the baseplate of the engine and APU fire control panel [1].

SUBTASK 26-00-01-030-005

(9) Remove the screws [7] that hold the engine and APU fire shutoff switch [8] to the baseplate of the engine and APU fire control panel [1].

SUBTASK 26-00-01-030-006

(10) Slide the applicable engine and APU fire shutoff switch [8] and remove it.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

ENGINE AND APU FIRE CONTROL PANEL (P8-1)

A

1367578 S0000247366_V4

Engine and APU Fire Shutoff Switch Assembly Installation
Figure 402/26-00-01-990-802 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2966435 S0000745347_V1

Engine and APU Fire Shutoff Switch Assembly Installation
Figure 402/26-00-01-990-802 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-00-01-400-802

5. Engine and APU Fire Shutoff Switch Assembly Installation

(Figure 402)

A. General

(1) This task gives instructions to install the Engine and Auxiliary Power Unit (APU) Fire Shutoff Switch Assembly.

B. References

Reference	Title
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
26-21-00-720-802	Engine Fire Switch System Shutdown Test (P/B 501)
26-22-00-720-801	APU Fire Switch System Shutdown Test (P/B 501)

C. Consumable Materials

Reference	Description	Specification
A00142	Sealant - Temperature Resistant, Fuel Pressure, And Weather Sealant	BMS5-44
A50110	Sealant - Fuel Tank	BMS5-45 Class B-2

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
8	Engine and APU fire shutoff switch	26-21-51-03-075	LOM ALL
		26-21-51-03-080	LOM ALL

E. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

F. Prepare for the Installation

SUBTASK 26-00-01-865-002

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G. Engine and APU Fire Shutoff Switch Installation

SUBTASK 26-00-01-860-014

> **CAUTION** DO NOT TOUCH THE CONTROL UNIT BEFORE YOU DO THE PROCEDURE FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE CONTROL UNIT.

(1) Before you touch the engine and APU fire control panel [1], do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 26-00-01-420-002

(2) Make sure that the fire shutoff switch electrical connector is accessible for installation to the engine and APU fire shutoff switch [8].

(a) If the electrical connector is not accessible, carefully slide the engine and APU fire control panel [1] out.

SUBTASK 26-00-01-420-003

(3) Put the engine and APU fire shutoff switch [8] in its position in the engine and APU fire control panel [1].

NOTE: There are indexing pins on the switch.

SUBTASK 26-00-01-420-004

(4) Install the screws [7] to attach the engine and APU fire shutoff switch [8] to the baseplate of the engine and APU fire control panel [1].

SUBTASK 26-00-01-420-008

(5) If it was removed, install the lightplate [4], do these steps:

(a) Put the lightplate [4] in its position on the baseplate.

(b) Install the screws [6] to attach the lightplate [4] to the baseplate.

SUBTASK 26-00-01-420-010

(6) If it was removed, install the lightplate [5], do these steps:

(a) Put the lightplate [5] in its position on the baseplate.

(b) Install the screws [6] to attach the lightplate [5] to the baseplate.

(c) Install the bell cutout handle [2].

1) Install the screws [3] to attach the bell cutout handle [2] to the switch rod.

SUBTASK 26-00-01-420-009

(7) Install the cover [9], do these steps:

(a) If it is necessary, remove the old sealant from the cover [9].

(b) Put the cover [9] in its position.

(c) Install the screws [10] to attach the cover [9] to the engine and APU fire control panel [1].

(d) Apply sealant, A00142, or sealant, A50110, between the cover [9] and baseplate.

1) Make sure that the engine and APU fire control panel [1] is sealed in its entirety around the perimeter of the baseplate and covers.

NOTE: This is to provide a moisture-tight seal.

SUBTASK 26-00-01-420-005

(8) Remove the protective cover from the electrical connector of the applicable engine and APU fire shutoff switch [8].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-00-01-420-006

(9) Examine the electrical connector for bent, broken pins, dirt or damage.

(a) If it is necessary, clean or repair the electrical connector.

SUBTASK 26-00-01-430-001

(10) Connect the electrical connector to the applicable engine and APU fire shutoff switch [8].

SUBTASK 26-00-01-420-007

(11) Slide the engine and APU fire control panel [1] into the frame and secure with the quarter-turn fasteners.

H. Electrical System Installation Test

SUBTASK 26-00-01-700-001

(1) Do this task, as applicable: Engine Fire Switch System Shutdown Test, TASK 26-21-00-720-802 or APU Fire Switch System Shutdown Test, TASK 26-22-00-720-801.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 26-00-01-860-009

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	1	C01316	ENGINE 1 START LEVER CHAN A
B	2	C01317	ENGINE 1 START LEVER CHAN B
B	5	C00276	ENGINE 1 THRUST REVERSER CONT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	6	C01318	ENGINE 2 START LEVER CHAN A
B	7	C01319	ENGINE 2 START LEVER CHAN B
B	19	C01344	APU FIRE SW POWER
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L
C	7	C00277	ENGINE 2 THRUST REVERSER CONT
C	18	C00348	HYDRAULIC SYSTEM SHUTOFF VALVE ENG 2
C	19	C00347	HYDRAULIC SYSTEM SHUTOFF VALVE ENG 1

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	5	C00540	FUEL SPAR VALVE IND
C	12	C01276	MASTER CAUTION ANNUNCIATOR CONT 2
E	3	C01321	ENGINE FUEL ENGINE 2 HPSOV CONT

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
E	4	C01396	ENGINE FUEL ENGINE 2 HPSOV IND
E	5	C01320	ENGINE FUEL ENGINE 1 HPSOV CONT
E	6	C01395	ENGINE FUEL ENGINE 1 HPSOV IND
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6
F	13	C01179	INDICATOR MASTER DIM SECT 7
F	14	C01180	INDICATOR MASTER DIM SECT 8

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	5	C00259	AIR CONDITIONING BLEED AIR VALVE ISLN
A	7	C00796	AIR CONDITIONING BLEED AIR VALVES L
A	14	C00033	AUX POWER UNIT CONT
B	7	C00797	AIR CONDITIONING BLEED AIR VALVES R
F	12	C01285	GENERATOR APU GEN CONT UNIT

Power Distribution Panel Number 2, P92

Row	Col	Number	Name
C	9	C01326	APU GEN CONT UNIT

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO FIRE CONTROL PANEL - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) Cargo Fire Control Panel Removal

(2) Cargo Fire Control Panel Installation.

B. The Cargo Fire Control Panel is installed on the P8 aisle control stand in the flight compartment.

TASK 26-00-02-000-801

2. Cargo Fire Control Panel Removal

(Figure 401)

A. General

(1) This task gives instructions to remove the Cargo Fire Control Panel.

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)

C. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Removal

SUBTASK 26-00-02-860-001

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

Circuit Breaker Panel 5, P8

Row	Col	Number	Name
---	---	C01097	ELEX PANEL LIGHTS AFT F/O

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	8	C00701	EMER PANEL LTG
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
F	13	C01179	INDICATOR MASTER DIM SECT 7

ECCN 9E991 BOEING PROPRIETARY - See title page for details

E. Cargo Fire Control Panel Removal

SUBTASK 26-00-02-910-001

> **CAUTION**
> DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(1) Before the cargo fire control panel [1] is touched, do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

SUBTASK 26-00-02-020-005

(2) Loosen the four quarter turn fasteners that attach the cargo fire control panel [1] to the frame.

SUBTASK 26-00-02-020-006

(3) Slide the cargo fire control panel [1] from the frame.

SUBTASK 26-00-02-020-007

(4) Tag and remove the electrical connectors.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Cargo Fire Control Panel Installation
Figure 401/26-00-02-990-801

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-00-02-400-801

3. Cargo Fire Control Panel Installation

(Figure 401)

A. General

(1) This task gives instructions to install the Cargo Fire Control Panel.

B. References

Reference	Title
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
26-23-00-730-802	Cargo Fire Single Extinguishing Bottle Pressure Switch Circuit Test (P/B 501)
26-23-00-730-810	Cargo Fire Dual Extinguishing Bottle Pressure Switch Circuit Test (P/B 501)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Cargo fire control panel	26-00-02-03-050	LOM ALL

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the Installation

SUBTASK 26-00-02-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

Circuit Breaker Panel 5, P8

Row	Col	Number	Name
---	---	C01097	ELEX PANEL LIGHTS AFT F/O

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	8	C00701	EMER PANEL LTG
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
F	13	C01179	INDICATOR MASTER DIM SECT 7

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F. Cargo Fire Control Panel Installation

SUBTASK 26-00-02-910-002

> **CAUTION** DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(1) Before the cargo fire control panel [1] is touched, Do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 26-00-02-420-002

(2) Install the connectors on the fire control panel and remove the tags.

SUBTASK 26-00-02-020-008

(3) Slide the cargo fire control panel [1] into the frame and attach with the four quarter turn fasteners.

SUBTASK 26-00-02-860-004

(4) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

Circuit Breaker Panel 5, P8

Row	Col	Number	Name
---	---	C01097	ELEX PANEL LIGHTS AFT F/O

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
D	8	C00701	EMER PANEL LTG
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
F	13	C01179	INDICATOR MASTER DIM SECT 7

G. Cargo Fire Control Panel Installation Test

SUBTASK 26-00-02-720-001

(1) Push the TEST switch on the Cargo Fire Control Panel.

(a) Make sure the DETECTOR FAULT light stays off.

(b) Make sure the red FWD and AFT fire lights come on.

(c) Make sure the green FWD and AFT EXT lights come on.

(d) Make sure the amber DISCH light comes on.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-00-02-720-003

(2) Do this task: Cargo Fire Single Extinguishing Bottle Pressure Switch Circuit Test, TASK 26-23-00-730-802 or Cargo Fire Dual Extinguishing Bottle Pressure Switch Circuit Test, TASK 26-23-00-730-810.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

DETECTION - ADJUSTMENT/TEST

1. **General**

A. This procedure has these tasks:

(1) An operational test of the fire and overheat detection system

(2) An overheat detection test using handheld LCRZ meter

(3) An overheat detection test using UN-ATE by Technologies Harness Scanner.

B. The operational test uses the test switches on the Engine and APU Fire Control Panel, P8-1, in the flight compartment. It also uses the test switch on the Fire Detection Control Unit, M279, in the Electrical and Electronics Compartment.

C. The fire and overheat detection system consists of the following systems:

(1) The engine fire detection system

(2) The APU fire detection system

(3) The wheel well, wing, and aft lower body (compartment) overheat detection system.

TASK 26-10-00-710-801

2. **Fire and Overheat Detection System - Operational Test**

(Figure 501 and Figure 502)

A. General

(1) The operational test makes sure that the Engine, Auxiliary Power Unit (APU), and Compartment Fire/Overheat Detection Systems operate correctly. The operational test uses only equipment that is installed on the airplane and it does not disturb the airplane systems. The operational test consists of these tests:

(a) The FIRE/OVHT test for loops A and B.

(b) The FIRE/OVHT test for loop A.

(c) The FIRE/OVHT test for loop B.

(d) The FAULT/INOP test for loops A and B.

(e) The test for an Engine 1 Detection Fault.

(f) The test for an Engine 2 Detection Fault.

(g) The test for an APU Detection Fault.

(h) The Air Mode Test for the P28 APU Remote Control Panel.

(2) This test will do a check of all the systems affected by the detection test switches on the P8-1 engine and APU fire control panel. In other words, when you do the detection tests, you will look for every indication that is affected by the test.

(3) A brief system description is included at the end of the procedure, refer to Table 501, Table 502, Table 503.

(4) The Engine and APU Fire Detection Systems are monitored and controlled by the fire detection control module, M279, in the electrical and electronics compartment. The Compartment Overheat System is monitored and controlled by the compartment overheat detection controller, M237, in the electrical and electronics compartment. The module and the controller send fire, overheat, and fault signals to the P8-1 engine and APU fire control panel, and the P7 pilot's glareshield, in the flight compartment. The module also sends an APU fire signal to the P28 APU remote control panel, in the right main wheel well.

(a) The Engine and APU Fire, Overheat, and Fault Warning Indications are as follows:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Table 501/26-10-00-993-805

System	Condition	Indication	Location
ENGINE 1	FIRE	Engine 1 Fire Handle Light (red)	P8-1
		MASTER CAUTION Lights (amber)	P7
		FIRE WARN Lights (red)	P7
		Flight Compartment Fire Bell	M315
ENGINE 2	FIRE	Engine 2 Fire Handle Light (red)	P8-1
		MASTER CAUTION Lights (amber)	P7
		FIRE WARN Lights (red)	P7
		Flight Compartment Fire Bell	M315
ENGINE 1	OVER-HEAT	ENG 1 OVERHEAT Light (amber)	P8-1
		MASTER CAUTION Lights (amber)	P7
		OVHT/DET Light (amber)	P7
ENGINE 2	OVER-HEAT	ENG 2 OVERHEAT Light (amber)	P8-1
		MASTER CAUTION Lights (amber)	P7
		OVHT/DET Light (amber)	P7
ENGINE 1	FAULT	FAULT Light (amber)	P8-1
		ENGINE NO. 1 LOOP A Light (amber)	M279
		ENGINE NO. 1 LOOP B Light (amber)	M279
ENGINE 2	FAULT	FAULT Light (amber)	P8-1
		ENGINE NO. 2 LOOP A Light (amber)	M279
		ENGINE NO. 2 LOOP B Light (amber)	M279
APU	FIRE	APU Fire Handle Light (red)	P8-1
		MASTER CAUTION Lights (amber)	P7
		FIRE WARN Lights (red)	P7
		Flight Compartment Fire Bell	M315
		Right Wheel Well APU Fire Warning Horn	M277
		APU Remote Fire Light (red)	P28

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Table 501/26-10-00-993-805 (Continued)

System	Condition	Indication	Location
APU	OVER-HEAT	MASTER CAUTION Light (amber)	P7
		OVHT/DET Light (amber)	P7
APU	FAULT	APU DET INOP Light (amber)	P8-1
		APU Light (amber)	M279

(b) The Engine Fire Detection System has dual sensors in each loop and operates in "AND" logic. Therefore, both loops must sense a fire or a fault before the fire or fault indication is shown. The following table is a summary of the indications that will be given for the various conditions of the sensing loops:

Table 502/26-10-00-993-806

LOOP 1	LOOP 2	INDICATIONS
NORMAL	NORMAL	NONE
NORMAL	INOP	NONE
NORMAL	FAULT	NONE
NORMAL	FIRE	NONE
INOP	NORMAL	NONE
INOP	INOP	NONE
INOP	FAULT	FAULT
INOP	FIRE	FIRE
FAULT	NORMAL	NONE
FAULT	INOP	FAULT
FAULT	FAULT	FAULT
FAULT	FIRE	FIRE
FIRE	NORMAL	NONE
FIRE	INOP	FIRE
FIRE	FAULT	FIRE
FIRE	FIRE	FIRE

(c) The following table shows all the fire, overheat, and fault indications in the flight compartment. These are the indications that will occur when the OVHT DET switches are in the normal position and you set the TEST switch to the FIRE/OVHT position, then to the NORMAL position, then to the FAULT INOP position, and then to the NORMAL position:

Table 503/26-10-00-993-807

INDICATOR	LOC	FIRE/ OVHT	NORMAL	FAULT/ INOP	NORMAL
Engine "1" Light	P8-1	ON	OFF	OFF	OFF

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Table 503/26-10-00-993-807 (Continued)

INDICATOR	LOC	FIRE/ OVHT	NORMAL	FAULT/ INOP	NORMAL
Engine "2" Light	P8-1	ON	OFF	OFF	OFF
"APU" Light	P8-1	ON	OFF	OFF	OFF
"ENG 1 OVHT" Light	P8-1	ON	OFF	OFF	OFF
"ENG 2 OVHT" Light	P8-1	ON	OFF	OFF	OFF
"WHEEL WELL" Light	P8-1	ON	OFF	OFF	OFF
"APU DET INOP" Light	P8-1	OFF	OFF	ON	OFF
"FAULT" Light	P8-1	OFF	OFF	ON	OFF
"FIRE WARN" Light *[1]	P7	ON	OFF	OFF	OFF
"MASTER CAUTION" Light	P7	ON	*[2]	ON	*[2]
"OVHT/DET" Light	P7	ON	*[2]	ON	*[2]
Flight Compt Bell *[1]	M315	ON	OFF	OFF	OFF
Wheel Well Bell *[1]	M277	ON	OFF	OFF	OFF
Remote Fire Light *[1]	P28	ON	OFF	OFF	OFF

*[1] Reset by pulling the "BELL CUTOUT" switch or by pushing the "FIRE/WARN" light, or by pushing the "HORN CUTOUT" switch on the P28 panel.

*[2] Reset by pushing the "MASTER/CAUTION" light.

B. References

Reference	Title
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Operational Test

SUBTASK 26-10-00-860-002

(1) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6

SUBTASK 26-10-00-860-003

(2) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

SUBTASK 26-10-00-860-004

(3) Make sure that the MASTER CAUTION lights and the OVHT/FIRE lights, on the P7 pilots glareshield, are not on.

E. Test of the FIRE/OVHT for Loops A and B

SUBTASK 26-10-00-710-001

(1) Make sure that the two OVHT DET switches, on the P8-1 engine and APU fire control panel, are in the NORMAL positions.

SUBTASK 26-10-00-710-002

(2) Move and hold the TEST switch, on the P8-1 engine and APU fire control panel, to the OVHT/FIRE position.

(a) Make sure that the following lights, on the P8-1 engine and APU fire control panel, come on:

1) Engine 1 Fire Handle light (Red).
2) Engine 2 Fire Handle light (Red).
3) APU Fire Handle light (Red).
4) ENG 1 OVERHEAT light (Amber).
5) ENG 2 OVERHEAT light (Amber).

(b) Make sure that the following lights, on the P7 pilot's glareshield, come on:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
2) The Captain's and First Officer's FIRE WARN lights (Red).
3) The OVHT/DET light (Amber).

(c) Make sure that you hear the bell in the captains master warning and caution annunciator, in the flight compartment.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 462-999

(d) Make sure that the lights on the left and right engine start levers, on the P10 engine start lever panel, come on.

LOM ALL

(e) Make sure that the APU fire warning horn in the right main wheel well comes on.

(f) Make sure that the red light, on the P28 APU remote control panel, in the right main wheel well, flashes on and off at approximately one cycle per second.

(g) Push the BELL CUTOUT switch on the P8-1 engine and APU fire control panel.

NOTE: If you push the HORN CUTOUT switch on the P28 panel, or either of the FIRE WARN lights on the P7 panel, the same conditions will occur. The BELL CUTOUT switch, the HORN CUTOUT switch, and the FIRE WARN switch cause the same resets but from different locations.

1) Make sure that you do not hear the bell in the captains master warning and caution annunciator, in the flight compartment.

2) Make sure that the two FIRE WARN lights, on the P7 pilot's glareshield, go off.

3) Make sure that the APU fire warning horn, in the right main wheel well, stops.

4) Make sure that the red light on the P28 panel, in the right main wheel well, comes on and does not flash.

SUBTASK 26-10-00-710-003

(3) Release the TEST switch on the P8-1 engine and APU fire control panel.

(a) Make sure that the following lights, on the P8-1 engine and APU fire control panel, go off:

1) Engine 1 Fire Handle light (Red).

2) Engine 2 Fire Handle light (Red).

3) APU Fire Handle light (Red).

4) ENG 1 OVERHEAT light (Amber).

5) ENG 2 OVERHEAT light (Amber).

(b) Make sure that the following light, on the P28 APU remote control panel, in the main landing gear wheel well, goes off:

1) APU Remote Fire light (Red).

(c) Make sure that the following lights, on the P7 pilot's glareshield, go off:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).

2) The Captain's and First Officer's FIRE WARN lights (Red).

3) The OVHT/DET light (Amber).

LOM 462-999

(d) Make sure that the lights, on the left and right engine start levers, on the P10 engine start lever panel, turn off.

LOM ALL

F. Test of the FIRE/OVHT for Loop A

SUBTASK 26-10-00-710-004

(1) Move the two OVHT DET switches, on the P8-1 engine and APU fire control panel, to the A positions.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-10-00-710-005

(2) Move and hold the TEST switch, on the P8-1 engine and APU fire control panel, to the OVHT/FIRE position.

(a) Make sure that the following lights, on the P8-1 engine and APU fire control panel, come on:

1) Engine 1 Fire Handle light (Red).
2) Engine 2 Fire Handle light (Red).
3) APU Fire Handle light (Red).
4) ENG 1 OVERHEAT light (Amber).
5) ENG 2 OVERHEAT light (Amber).

(b) Make sure that the following lights, on the P7 pilot's glareshield, come on:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
2) The Captain's and First Officer's FIRE WARN lights (Red).
3) The OVHT/DET light (Amber).

(c) Make sure that the bell, in the aural warning module, M315, comes on.

LOM 462-999

(d) Make sure that the lights, on the left and right engine start levers, on the P10 engine start lever panel, come on.

LOM ALL

(e) Make sure that the APU fire warning horn, in the right main wheel well, comes on.

(f) Make sure that the red light, on the P28 APU remote control panel, in the right main wheel well, flashes on and off at approximately one cycle per second.

SUBTASK 26-10-00-710-006

(3) Release the TEST switch on the P8-1 engine and APU fire control panel.

(a) Make sure that the following lights, on the P8-1 engine and APU fire control panel, go off:

1) Engine 1 Fire Handle light (Red).
2) Engine 2 Fire Handle light (Red).
3) APU Fire Handle light (Red).
4) ENG 1 OVERHEAT light (Amber).
5) ENG 2 OVERHEAT light (Amber).

(b) Make sure that the following light, on the P28 APU remote control panel, in the main landing gear wheel well, goes off:

1) APU Remote Fire light (Red).

(c) Make sure that the following lights, on the P7 pilot's glareshield, go off:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
2) The Captain's and First Officer's FIRE WARN lights (Red).
3) The OVHT/DET light (Amber).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 462-999

(d) Make sure that the lights, on the left and right engine start levers, on the P10 engine start lever panel, turn off.

LOM ALL

G. Test of the FIRE/OVHT for Loop B

SUBTASK 26-10-00-710-007

(1) Move the two OVHT DET switches, on the P8-1 engine and APU fire control panel, to the B positions.

SUBTASK 26-10-00-710-008

(2) Move and hold the TEST switch, on the P8-1 engine and APU fire control panel, to the OVHT/FIRE position.

(a) Make sure that the following lights, on the P8-1 engine and APU fire control panel, come on:

1) Engine 1 Fire Handle light (Red).
2) Engine 2 Fire Handle light (Red).
3) APU Fire Handle light (Red).
4) ENG 1 OVERHEAT light (Amber).
5) ENG 2 OVERHEAT light (Amber).

(b) Make sure that the following lights, on the P7 pilot's glareshield, come on:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
2) The Captain's and First Officer's FIRE WARN lights (Red).
3) The OVHT/DET light (Amber).

(c) Make sure that the bell, in the aural warning module, M315, comes on.

LOM 462-999

(d) Make sure that the lights, on the left and right engine start levers, on the P10 engine start lever panel, come on.

LOM ALL

(e) Make sure that the APU fire warning horn, in the right main wheel well, comes on.

(f) Make sure that the red light, on the P28 APU remote control panel, in the right main wheel well, flashes on and off at approximately one cycle per second.

SUBTASK 26-10-00-710-009

(3) Release the TEST switch on the P8-1 engine and APU fire control panel.

(a) Make sure that the following lights, on the P8-1 engine and APU fire control panel, go off:

1) Engine 1 Fire Handle light (Red).
2) Engine 2 Fire Handle light (Red).
3) APU Fire Handle light (Red).
4) ENG 1 OVERHEAT light (Amber).
5) ENG 2 OVERHEAT light (Amber).

(b) Make sure that the following light, on the P28 APU remote control panel, in the main landing gear wheel well, goes off:

1) APU Remote Fire light (Red).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(c) Make sure that the following lights, on the P7 pilot's glareshield, go off:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
2) The Captain's and First Officer's FIRE WARN lights (Red).
3) The OVHT/DET light (Amber).

LOM 462-999

(d) Make sure that the lights, on the left and right engine start levers, on the P10 engine start lever panel, turn off.

LOM ALL

H. Test of the FAULT/INOP for Loops A and B

SUBTASK 26-10-00-710-010

(1) Move the two OVHT DET switches, on the P8-1 engine and APU fire control panel, to the NORMAL positions.

SUBTASK 26-10-00-710-011

(2) Move and hold the TEST switch, on the P8-1 engine and APU fire control panel, to the FAULT/INOP position.

(a) Make sure that the following lights, on the P8-1 engine and APU fire control panel, come on:

1) FAULT light (Amber).
2) APU DET INOP light (Amber).

(b) Make sure that the following lights, on the P7 pilot's glareshield, come on:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
2) The OVHT/DET light (Amber).

(c) Make sure that the following lights, on the engine and APU fire detection control unit, M279, on the E2-2 shelf in the electrical and electronics compartment, come on:

1) ENGINE 1 LOOP A (Amber).
2) ENGINE 1 LOOP B (Amber).
3) ENGINE 2 LOOP A (Amber).
4) ENGINE 2 LOOP B (Amber).
5) APU (Amber).
6) The three FAULT CODE lights are ON-ON-ON.

SUBTASK 26-10-00-710-012

(3) Release the TEST switch on the P8-1 engine and APU fire control panel.

(a) Make sure that the following lights, on the P8-1 engine and APU fire control panel, are off:

1) FAULT light (Amber).
2) APU DET INOP light (Amber).

(b) Make sure that the following lights, on the P7 pilot's glareshield, are off:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
2) The OVHT/DET light (Amber).

(c) Make sure that the following lights, on the engine and APU fire detection control unit, M279, in the electrical and electronics compartment, are off:

1) ENGINE 1 LOOP A (Amber).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2) ENGINE 1 LOOP B (Amber).
3) ENGINE 2 LOOP A (Amber).
4) ENGINE 2 LOOP B (Amber).
5) APU (Amber).
6) The three FAULT CODE lights are "OFF-OFF-OFF".

I. Test for an Engine 1 Detection Fault

SUBTASK 26-10-00-860-005

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

(a) Make sure that the FAULT light (amber), on the P8-1 engine and APU fire control panel, is on (Figure 501).

(b) Make sure that the following lights, on the fire detection control module, M279, in the electrical and electronics compartment, come on (Figure 502):

1) ENGINE 1 LOOP A (Amber).
2) ENGINE 1 LOOP B (Amber).
3) The three FAULT CODE lights are OFF-OFF-ON.

SUBTASK 26-10-00-860-006

(2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

(a) Make sure that the FAULT light (amber), on the P8-1 engine and APU fire control panel, is off.

(b) Make sure that the following lights, on the fire detection control module, M279, in the electrical and electronics compartment, go off:

1) ENGINE 1 LOOP A (Amber).
2) ENGINE 1 LOOP B (Amber).
3) The three FAULT CODE lights are OFF-OFF-OFF.

J. Test for an Engine 2 Detection Fault

SUBTASK 26-10-00-860-007

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2

(a) Make sure that the FAULT light (amber), on the P8-1 engine and APU fire control panel, is on.

(b) Make sure that the following lights, on the fire detection control module, M279, in the electrical and electronics compartment, come on:

1) ENGINE 2 LOOP A (Amber).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2) ENGINE 2 LOOP B (Amber).

3) The three FAULT CODE lights are OFF-OFF-ON.

SUBTASK 26-10-00-860-008

(2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2

(a) Make sure that the FAULT light (amber), on the P8-1 engine and APU fire control panel, is off (Figure 501).

(b) Make sure that the following lights, on the fire detection control module, M279, in the electrical and electronics compartment, go off (Figure 502):

1) ENGINE 2 LOOP A (Amber).

2) ENGINE 2 LOOP B (Amber).

3) The three FAULT CODE lights are OFF-OFF-OFF.

K. Test for an APU Detection Fault

SUBTASK 26-10-00-860-009

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU

(a) Make sure that the Captain's and First Officer's MASTER CAUTION lights (amber), on the P7 pilot's glareshield, are on.

(b) Make sure that the OVHT/DET light (amber), on the P7 pilot's glareshield, is on.

(c) Make sure that the APU DET INOP light (amber), on the P8-1 engine and APU fire control panel, is on.

(d) Make sure that the APU light (amber), on the fire detection control module, M279, in the electrical and electronics compartment, comes on.

(e) Make sure that the three FAULT CODE lights, on the fire detection control module, M279, are OFF-OFF-ON.

SUBTASK 26-10-00-860-010

(2) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU

(a) Make sure that the Captain's and First Officer's MASTER CAUTION lights (amber), on the P7 pilot's glareshield, are off.

(b) Make sure that the OVHT/DET light (amber), on the P7 pilot's glareshield, is off.

(c) Make sure that the APU DET INOP light (amber), on the P8-1 engine and APU fire control panel, is off.

(d) Make sure that the APU light (amber), on the fire detection control module, M279, in the electrical and electronics compartment, is off.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(e) Make sure that the three FAULT CODE lights, on the fire detection control module, M279, are OFF-OFF-OFF.

L. Air Mode Test for the P28 APU Remote Control Panel

SUBTASK 26-10-00-860-011

> **WARNING** MAKE SURE THAT ALL PERSONS AND EQUIPMENT ARE CLEAR OF THE CONTROL SURFACES AND LANDING GEAR DOOR AREAS. THE CONTROL SURFACES, THE LANDING GEAR, AND THE LANDING GEAR DOORS CAN MOVE WHEN YOU DO THE AIR MODE SIMULATION. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

SUBTASK 26-10-00-710-013

(2) Move and hold the TEST switch, on the P8-1 engine and APU fire control panel, to the OVHT/FIRE position.

NOTE: Other indications will occur. Ignore all the indications that are not listed in the steps that follow.

(a) Make sure that the APU fire warning horn, in the right main wheel well, does not come on.

(b) Make sure that the red light, on the P28 APU remote control panel, in the right main wheel well, flashes on and off at approximately one cycle per second.

(c) Push the HORN CUTOUT switch on the P28 APU remote control panel.

(d) Make sure that the red light, on the P28 APU remote control panel, stays on and does not flash.

SUBTASK 26-10-00-710-014

(3) Release the TEST switch on the P8-1 engine and APU fire control panel.

SUBTASK 26-10-00-860-012

(4) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

M. Put the Airplane Back to Its Usual Condition

SUBTASK 26-10-00-860-013

(1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CAPTAIN'S WARNING
LIGHTS (P7)

B

CAPTAIN'S FIRE
WARNING SWITCH (P7)
(FIRST OFFICER'S IS OPPOSITE)

A

FIRE CONTROL PANEL (P8-1)

C

G16092 S0006568014_V3

Auxiliary Power Unit (APU) Fire Detection Test
Figure 501/26-10-00-990-803 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Auxiliary Power Unit (APU) Fire Detection Test
Figure 501/26-10-00-990-803 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F21810 S0006568019_V2

Engine and APU Fire Detection Control Unit Installation
Figure 502/26-10-00-990-804 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

[1] FIRE DETECTION CONTROL UNIT

B

F98200 S0006568020_V2

Engine and APU Fire Detection Control Unit Installation
Figure 502/26-10-00-990-804 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-10-00-700-801

3. Overheat Detection Test Using Handheld LCRZ Meter

A. General

(1) This task consists of the following procedures using a 1v/1kHz AC LCRZ impedance meter:

(a) Instructions for the health check of the compartment overheat loop detectors and wiring.

1) This procedure is used to detect shorts, open, and degraded overheat loop detectors in the wing and body overheat detection system.

(b) Instructions for locating faulty detector or wiring for compartment overheat loop that reads less than nominal range.

1) This procedure is used to isolate an entire loop to a degraded or failed detector, or to a wiring problem.

B. References

Reference	Title
22-11-33-000-801	Flight Control Computer Removal (P/B 401)
22-11-33-400-801	Flight Control Computer Installation (P/B 401)
24-22-00-860-812	Remove Electrical Power (P/B 201)
26-18-01-000-801	Compartment Overheat Detection Control Unit Removal (P/B 401)
26-18-01-400-801	Compartment Overheat Detection Control Unit Installation (P/B 401)
26-18-02-000-801	Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal (P/B 401)
26-18-02-400-801	Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation (P/B 401)
WDM 26-12-11	Wiring Diagram Manual

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-17158	Controller - Loop Opt Part #: 9240 SI Supplier: FBCN9
COM-17417	Controller - Loop Part #: 20549 SI Supplier: FBCN9
COM-20443	Meter - LCR and Z (Inductance, Capacitance, Resistance and Impedance) Part #: 880 Supplier: 08098
SPL-12922	Assembly - Extender Box C26007-3, -73 (included in C26007 Eqpt) Part #: C26007-72 Supplier: 81205 Opt Part #: C26007-1 Supplier: 81205

D. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

ECCN 9E991 BOEING PROPRIETARY - See title page for details

E. Prepare for Overheat Detection Loop Health Check and Troubleshooting

SUBTASK 26-10-00-860-017

(1) Do this task: Remove Electrical Power, TASK 24-22-00-860-812.

NOTE: Electrical power must be off to prevent incorrect LCRZ meter readings because of Electromagnetic Interference (EI).

SUBTASK 26-10-00-860-018

(2) Make sure that the battery switch is in the OFF position on the P5 overhead panel.

SUBTASK 26-10-00-860-019

(3) Make sure that all ground power is disconnected.

SUBTASK 26-10-00-020-001

(4) Remove the M237 compartment overheat detection control unit (TASK 26-18-01-000-801).

SUBTASK 26-10-00-480-001

(5) Install the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, on the compartment overheat detection control unit mount.

SUBTASK 26-10-00-020-002

(6) If overheat detection module extender box assembly, C26007-3, -73, SPL-12922, is not available, remove the flight control computer B if it is necessary (TASK 22-11-33-000-801).

NOTE: Removal of flight control computer B is for easier access to overheat detection control unit electrical connector.

SUBTASK 26-10-00-480-002

CAUTION

DO NOT USE A NON-EQUIVALENT METER, OR A DC METER, FOR THE LOOP ELEMENTS. IF YOU DO NOT OBEY, DAMAGE CAN OCCUR.

(7) If you use the loop controller, COM-17158, or Inductance, Capacitance, Resistance and Impedance (LCRZ) meter, COM-20443 (preferred), do the following steps:

(a) Connect the black test lead to the black receptacle port.

(b) Connect the red test lead to the red receptacle port.

SUBTASK 26-10-00-480-003

CAUTION

DO NOT USE A NON-EQUIVALENT METER, OR A DC METER, FOR THE LOOP ELEMENTS. IF YOU DO NOT OBEY, DAMAGE CAN OCCUR.

(8) If you use the loop controller, COM-17417, do the following steps:

(a) Connect the black test lead to the black receptacle port.

(b) Connect the red test lead to the red receptacle port.

(c) Connect the blue test lead to the blue receptacle port.

F. Overheat Detection Loop Health Check with COM-17158

SUBTASK 26-10-00-480-004

(1) Connect the black lead to aircraft ground.

SUBTASK 26-10-00-480-005

(2) Connect the red test lead to pin on compartment overheat detection controller receptacle D742 in Table 504.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Table 504/26-10-00-993-808 Overheat Detection Loop Health Check

Compartment Overheat Detection Controller Receptacle D742 Pin*[1]	Expected Reading (Impedance)
2	22k ohms +/- 5k
4	21k ohms +/- 5k
8	22k ohms +/- 5k
9	25k ohms +/- 5k
10	14k ohms +/- 5k
11	14k ohms +/- 5k
12	21k ohms +/- 5k
13	14k ohms +/- 5k
21	25k ohms +/- 5k
24	25k ohms +/- 5k
27	14k ohms +/- 5k
29	25k ohms +/- 5k

*[1] Refer to WDM 26-12-11.

SUBTASK 26-10-00-700-001

(3) Prepare the loop controller, COM-17158.

(a) For each measurement do these steps:

1) Allow reading to stabilize and record reading.

2) Set the switch to TEST then back to ISOL to reset unit.

3) Allow reading to stabilize and record reading.

4) Make sure that both readings are similar to provide accurate results.

(b) Check for a short or degraded detector by taking the measurements per Table 504.

1) If a reading is greater than the expected reading, check the wiring between the D742 connector and the first detector in the loop for an open circuit condition.

2) If a reading is between 5k ohms and the nominal range, a scheduled repeat test for degradation or replacement of the detector is recommended at the operator's convenience.

NOTE: This indicates that one of the detectors is degraded. The degraded detector may continue to degrade resulting in intermittent failures until it completely fails, which is typically within 180 days.

a) To isolate to the degraded detector, proceed to section “Locating Faulty Detector or Wiring For Overheat Detection Loop”.

3) If a reading is < 5k ohms, do the following to isolate the problem:

NOTE: This indicates that either one of the detectors is shorted between the center conductor and ground, or that there is a problem in the wiring.

a) To isolate to the degraded detector, proceed to section “Locating Faulty Detector or Wiring For Overheat Detection Loop”.

SUBTASK 26-10-00-080-001

(4) Disconnect the black test lead from ground.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-10-00-080-002

(5) Disconnect the black test lead from the loop controller, COM-17158, and connect to the green receptacle port.

SUBTASK 26-10-00-480-006

(6) Connect the red test lead and green test lead to pins on compartment overheat detection controller receptacle D742 in Table 505.

Table 505/26-10-00-993-809 Overheat Loop Detection Open Check

Compartment Overheat Detection Controller Receptacle D742 Pin*[1]	Expected Reading
2 to 8	< 15 ohms
4 to 12	< 15 ohms
9 to 29	< 15 ohms
10 to 11	< 20 ohms
13 to 27	< 20 ohms
21 to 24	< 15 ohms

*[1] Refer to WDM 26-12-11.

SUBTASK 26-10-00-700-002

(7) Set the loop controller, COM-17158, switch to CONT.

(a) For each measurement, do these steps:

1) Allow reading to stabilize and record reading.

2) Set the switch to TEST then back to CONT to reset unit.

3) Allow reading to stabilize and record reading.

4) Make sure that both readings are similar to provide accurate results.

SUBTASK 26-10-00-700-003

(8) Check for an open detector or circuit by taking the measurements per Table 505.

(a) If the reading is greater than the values shown in Table 505, do continuity checks of the applicable loop segments to isolate the failed loop or wiring.

(b) Replace the faulty detector or repair wiring, as applicable.

G. Overheat Detection Loop Health Check with COM-20443

SUBTASK 26-10-00-480-007

(1) Connect the black lead to aircraft ground.

SUBTASK 26-10-00-480-008

(2) Connect the red test lead to pin of connector in Table 504.

SUBTASK 26-10-00-700-004

(3) Prepare the Inductance, Capacitance, Resistance and Impedance (LCRZ) meter, COM-20443.

(a) Press the power button for one second to turn on meter.

(b) Press PRI/AUTO button until “Z” is displayed (for impedance measurement).

(c) Press FREQ/REC button until 1 kHz is displayed.

(d) Press the SEC/LEV button for 2 seconds to access the test voltage level options.

1) Press the SEC/LEV button momentarily to toggle setting to 1V.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(e) Press the RATE/P-S button momentarily until “SLOW” is displayed for a more stable reading.

(f) Press and hold L/C/R/P-S button for 2 seconds.

1) Press the L/C/R/P-S button momentarily to toggle to PAL (parallel) mode.

(g) For each measurement allow reading to stabilize and record reading.

SUBTASK 26-10-00-700-005

(4) Check for a short or degraded detector by taking the measurements per Table 504.

(a) If a reading is greater than the expected reading, check the wiring between the D742 connector and the first detector in the loop for an open circuit condition.

NOTE: A greater reading is permitted if the overheat detection unit BITE test passes.

(b) If a reading is between 5k ohms and the nominal range, a scheduled repeat test for degradation or replacement of the detector is recommended at the operator's convenience.

NOTE: This indicates that one of the detectors is degraded. The degraded detector may continue to degrade resulting in intermittent failures until it completely fails, which is typically within 180 days.

1) To isolate to the degraded detector, proceed to section “Locating Faulty Detector or Wiring for Overheat Detection Loop”.

(c) If a reading is < 5k ohms, do the following to isolate the problem:

NOTE: This indicates that either one of the detectors is shorted between the center conductor and ground, or that there is a problem in the wiring.

1) To isolate to the degraded detector, proceed to section “Locating Faulty Detector or Wiring for Overheat Detection Loop”.

SUBTASK 26-10-00-080-003

(5) Disconnect the black test lead from ground.

SUBTASK 26-10-00-480-009

(6) Connect the red test lead and black test lead to pins on D742 connector in Table 505.

SUBTASK 26-10-00-700-006

(7) Set the Inductance, Capacitance, Resistance and Impedance (LCRZ) meter, COM-20443, to measure continuity via DC resistance (DCR).

(a) If it is necessary, press the power button for two seconds to turn on meter.

(b) Press the PRI/AUTO button until DCR is displayed to select direct current resistance measurement.

(c) For each measurement allow reading to stabilize and record reading.

SUBTASK 26-10-00-700-007

(8) Check for an open detector or circuit by taking the measurements per Table 505.

(a) If the reading is greater than the values shown in Table 505, do continuity checks of the applicable loop segments to isolate the failed loop or wiring.

(b) Replace the faulty detector or repair wiring, as applicable.

H. Overheat Detection Loop Health Check with COM-17417

SUBTASK 26-10-00-480-010

(1) Connect the black lead to aircraft ground.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-10-00-480-011

(2) Connect the red test lead to pin on compartment overheat detection controller receptacle D742 in Table 504.

SUBTASK 26-10-00-700-008

(3) Press the INSULATION button on loop controller, COM-17417.

(a) For each measurement, allow reading to stabilize and record reading.

(b) Check for a short or degraded detector by taking the measurements per Table 504.

1) If a reading is greater than the expected reading, check the wiring between the D742 connector and the first detector in the loop for an open circuit condition.

NOTE: A greater reading is permitted if the overheat detection unit BITE test passes.

2) If a reading is between 5k ohms and the nominal range, a scheduled repeat test for degradation or replacement of the detector is recommended at the operator's convenience.

NOTE: This indicates that one of the detectors is degraded. The degraded detector may continue to degrade resulting in intermittent failures until it completely fails, which is typically within 180 days.

a) To isolate to the degraded detector, proceed to section “Locating Faulty Detector or Wiring For Overheat Detection Loop”.

3) If a reading is < 5k ohms, do the following to isolate the problem:

NOTE: This indicates that either one of the detectors is shorted between the center conductor and ground, or that there is a problem in the wiring.

a) To isolate to the degraded detector, proceed to section “Locating Faulty Detector or Wiring For Overheat Detection Loop”.

4) If all of the readings are within tolerance, continue to the next pin per Table 504.

SUBTASK 26-10-00-080-004

(4) Disconnect the black test lead from ground.

SUBTASK 26-10-00-080-005

(5) Disconnect the black test lead from loop controller, COM-17417, and connect to the blue receptacle port.

SUBTASK 26-10-00-480-012

(6) Connect the red test lead and blue test lead to pins on compartment overheat detection controller receptacle D742 in Table 505.

SUBTASK 26-10-00-700-009

(7) Press the CONTINUITY push-button on the loop controller, COM-17417.

(a) For each measurement, allow reading to stabilize and record reading.

SUBTASK 26-10-00-700-010

(8) Check for an open detector or circuit by taking the measurements per Table 505.

(a) If the reading is greater than the values shown in Table 505, do continuity checks of the applicable loop segments to isolate the failed loop or wiring.

NOTE: If the reading is greater than the values shown in Table 505, it is possible that it can be because of dirty connections or corrosion on the leads.

(b) Replace the faulty detector or repair wiring, as applicable.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

I. Locating Faulty Detector or Wiring For Overheat Detection Loop

SUBTASK 26-10-00-700-011

(1) For the applicable loop section, disconnect the loop at the approximate half way point (WDM 26-12-11).

NOTE: This will allow you to determine which side is faulty. For example, for the loop that connects to pins 4 and 12 of connector D742, disconnect between detectors M1761 and M268.

SUBTASK 26-10-00-700-012

(2) Check the readings again at each pin at the rack connector.

(a) The side that shows the lower reading is the faulty side.

(b) The resistance values should roughly double from the original expected value.

NOTE: For example, if the original expected reading was 21k ohms ± 5k ohms and you measured 5k ohms, when you disconnect the loops at the halfway point, the resistance should be +42k ohms on each side on a good system. If one side reads 42k ohms, and the other side reads 5k ohms, the faulty side is the one reading 5k ohms.

1) Note the faulty side, and reconnect the loop segments that were disconnected in the previous step.

2) Disconnect the loop at the approximate half way point of the faulty side.

3) Check the readings again at each pin at the connector rack.

a) The side that has the lower reading is the faulty side.

4) If it is necessary, continue to check to isolate to the faulty loop section.

5) Replace the faulty detector (TASK 26-18-02-000-801, TASK 26-18-02-400-801), or repair wiring (Standard Wiring Practices Manual (SWPM)), as applicable.

NOTE: Value for individual loops is 100k ohms, but this number varies by length. A very long section, 200+ inches, could read 100k ohms or below.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 26-10-00-080-006

(1) Remove the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, from the compartment overheat detection control unit mount.

SUBTASK 26-10-00-420-001

(2) If flight control computer B was removed, install the flight control computer B (TASK 22-11-33-400-801).

SUBTASK 26-10-00-410-001

(3) Install the compartment overheat detection control unit (TASK 26-18-01-400-801).

END OF TASK

TASK 26-10-00-700-802

4. Overheat Detection Test Using UN-ATE by Technologies Harness Scanner

A. General

(1) This task gives the instructions to do a health check of the compartment overheat loop detectors and wiring using the wiring tester, COM-17989.

(a) This task is used to detect shorts, open, and degraded overheat loop detectors in the wing and body overheat detection system.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
26-18-01-000-801	Compartment Overheat Detection Control Unit Removal (P/B 401)
26-18-01-400-801	Compartment Overheat Detection Control Unit Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-17989	Wiring Tester - Automated Wireless Part #: UN-ATE BASIC Supplier: 87Z60
SPL-17990	Interface Cable - UN-ATE Aircraft Bleed OH Loop Part #: A42 Supplier: 87Z60

D. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

E. Prepare for the Test

SUBTASK 26-10-00-860-014

(1) Do this task: Remove Electrical Power, TASK 24-22-00-860-812.

NOTE: Electrical power must be off to prevent incorrect fault indications or fault messages from occurring.

SUBTASK 26-10-00-860-015

(2) Make sure that the battery switch is in the OFF position on the P-5 overhead panel.

SUBTASK 26-10-00-860-016

(3) Make sure that all ground power is disconnected.

SUBTASK 26-10-00-020-003

(4) Remove the M237 compartment overheat detection control unit (TASK 26-18-01-000-801).

SUBTASK 26-10-00-480-013

(5) Insert the interface cable, SPL-17990, to the M237 compartment overheat detection control unit's connector on the airplane, with the optional electronic dust cap to verify if there is any power on the connector.

(a) If the electronic dust cap has power, remove the power.

SUBTASK 26-10-00-020-004

(6) If no power is confirmed, remove the electronic dust cap and connect the wiring tester, COM-17989, to the interface cable, SPL-17990.

(a) Do not ground the test box unit for the bleed overheat loop test.

NOTE: This may introduce error on the overheat loop readings.

SUBTASK 26-10-00-480-014

(7) Log into the tablet to provide testing and traceability.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) Start up the tablet and login with your user ID.

(b) Identify the location of the aircraft being maintained.

(c) Select the aircraft model.

(d) Select the aircraft subsystem (example: bleed OH loop).

(e) Identify the reason for your test (training/diagnostic/preventative).

(f) The software will now guide you into the set-up with pictograph.

F. Overheat Detection Test with UN-ATE

NOTE: Do not ground the test box unit for the bleed overheat loop test.

SUBTASK 26-10-00-700-013

(1) UN-ATE will make a scan to provide an overview of all OH loops.

(a) Select “Scan” on the wiring tester, COM-17989, software on the tablet.

1) The wiring tester, COM-17989, will automatically make impedance measurements on each loop circuit and present results as per wiring diagram.

NOTE: Each loop circuit will have three impedance measurements such as the Table 506 below.

Table 506/26-10-00-993-810 Overheat Loop Impedance Measurements

Measurement type	Impedance result	
Inner to inner core	Resistance (ohm)	Capacitance (nF)
One side inner to ground	Resistance (ohm)	Capacitance (nF)
Other side inner to ground	Resistance (ohm)	Capacitance (nF)

2) The wiring tester, COM-17989, will analyze the three measurement results of each loop circuit and highlight in color the problematic results based on the following condition scenarios in Table 507.

Table 507/26-10-00-993-811 Overheat Detection Loop Health Check

Wiring Example	Condition Scenarios	Resistance (ohm)	Capacitance (nF)	Loop health status	Reference procedure step
Loop Inner to Inner core	1	< 12 ohms*[1]	-	Good inner core	-
	2	> 12 ohms*[1]	-	Outside tolerance	Step (3)
	3	Any reading	1 to 100 nF	Opened inner core	Step (4)
Loop Inner to ground on both sides	4	1 M ohms-	1 to 100 nF	Excellent loop	Step (2)
	5	< 15 k ohms	1 to 100 nF	Shortened bad loop	Step (5)

*[1] The resistance values provided here are only arbitrary. The prescribed maximum tolerance values for each circuit will be populated into the baseline signature reference.

SUBTASK 26-10-00-700-016

(2) Healthy loop - All measurements are within their tolerance.

(a) Once the scan completed, wiring tester, COM-17989, shows NO HIGHLIGHT on any loop circuit indicating all loop circuit are HEALTHY.

(b) Go to Step (7).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-10-00-700-015

(3) Loop inner core measurement outside of tolerance.

(a) The wiring tester, COM-17989, flags an OUT OF TOLERANCE inner to inner core loop circuit.

1) This problem may be an indication of the degrading wire/loop connection (corrosion, pin insert, etc).

2) The procedure is to validate with conventional procedures and visual inspection.

SUBTASK 26-10-00-700-014

(4) Opened inner core loop fault location procedure.

(a) The wiring tester, COM-17989, flags an OPENED or discontinuity along the loop inner core.

NOTE: The wiring tester, COM-17989, fault detection feature is used to locate the discontinuity point.

1) Select the problematic loop and select FIRELOOP DIAGNOSTIC and then IDENTITY BAD LOOP to locate the closest point to the open fault location.

NOTE: The wiring tester, COM-17989, diagnostic feature may take up to ten minutes to process. Once the process is completed, the closest overheat fireloop segment causing the fault is highlighted.

2) Confirm the damage part (wire or fireloop segment) that cause the problem, do these steps:

a) Go to the fireloop segment located by the wiring tester, COM-17989, and do a check for any visible damage that may cause the discontinuity in the loop.

b) Manually disconnect one side of the fireloop segment closest to the wiring tester, COM-17989, located point.

c) Connect the INNER core lead at both sides of the connector to the ground (aircraft chassis) using two short cables with alligator clips and lead adaptors.

NOTE: This location is the manually grounded point.

d) In the wiring tester, COM-17989, software select REFRESH IMPEDANCE to re-measure the three impedance measurements of the selected loop (inner to inner core and inner to ground x 2).

e) The next step confirms if the fault is located at the RIGHT or LEFT side of the previously grounded point (Table 508).

NOTE: Table locates the fault segment according to the measurement results.

Table 508/26-10-00-993-812 Opened Inner Core Loop Check

Scenario	Measurement	Resistance (ohm)	Capacitance (nF)	Fault Location
-	Inner to inner	-	-	-
1	1st Inner to ground	XX ohm	-	Fault at the RIGHT side of the grounded point
	2nd Inner to ground	-	XX nF	
2	1st Inner to ground	-	XX nF	Fault at the LEFT side of the grounded point
	2nd Inner to ground	XX ohm	-	

ECCN 9E991 BOEING PROPRIETARY - See title page for details

f) Go to the previously grounded point undo the grounding and reconnect the disconnected fireloop segment.

g) Move to the next wire/fireloop segment (RIGHT or LEFT according to the previous deduction) and disconnect one side of the that segment and connect the inner core leads to the ground.

NOTE: This location is the second grounding point.

h) In the wiring tester, COM-17989, software redo the measurement by selecting REFRESH IMPEDANCE.

i) Confirm the side (RIGHT or LEFT) of the faulty segment.

NOTE: After this step, the faulty part may be precisely located. In some cases, other disconnecting and grounding processes may be required, especially in cases where multiple wire segments are inserted between overheat fireloop segments.

j) Once the faulty part located, confirmed its condition using conventional Boeing or operator procedure.

k) Replace or repair the part.

l) Do the complete scan in Step (1) again to confirm the repair.

SUBTASK 26-10-00-700-017

(5) Shorted bad loop fault location procedure.

(a) The wiring tester, COM-17989, flags a SHORTED loop or alteration of the loop insulation quality.

NOTE: The wiring tester, COM-17989, fault detection feature is used to locate the short point.

(b) Select the problematic loop and select FIRELOOP DIAGNOSTIC and then IDENTIFY BAD LOOP to locate the closest point to the short fault location.

NOTE: The wiring tester, COM-17989, diagnostic feature may take up to ten minutes to process. Once the process is completed, the closest wire/fireloop segment causing the fault is highlighted.

(c) Confirm the damage part (wire or fireloop segment) that cause the problem, do these steps:

1) Go to the wire/fireloop segment located by the wiring tester, COM-17989, and check for any visible damage that may cause the short in the loop.

2) Manually disconnect one side of the fireloop segment closest to the wiring tester, COM-17989, located point.

NOTE: This location is the floating point.

3) In the wiring tester, COM-17989, software select REFRESH IMPEDANCE to measure the three impedance measurements of the selected loop (inner to inner core and inner to ground x 2).

4) The next step confirms if the fault is located at the RIGHT or LEFT side of the previously floating point (Table 509).

NOTE: Table locates the fault segment according to the measurement results.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Table 509/26-10-00-993-813 Shorted Bad Loop Check

Scenario	Measurement	Resistance (ohm)	Capacitance (nF)	Fault Location
-	Inner to inner	-	-	-
1	1st Inner to ground	Short Resistance ohm	-	Fault at the LEFT side of the floating point
	2nd Inner to ground	-	XX nF	
2	1st Inner to ground	-	XX nF	Fault at the LEFT side of the floating point
	2nd Inner to ground	Short Resistance ohm		

5) Go to the previously floating point and reconnect the disconnected wire/fireloop segment.

6) Move to the next wire/fireloop segment (RIGHT or LEFT according to the previous deduction) and disconnect one side of that segment.

NOTE: This location is the second floating point.

7) In the wiring tester, COM-17989, software redo the measurement by selecting REFRESH IMPEDANCE.

8) Confirm the side (RIGHT or LEFT) of the faulty segment.

NOTE: After this step, the faulty part may be precisely located. In some cases, other disconnecting processes may be required, especially if the short resistance is between 10 k ohms to 15 k ohms.

9) Once the faulty part located, confirmed its condition using conventional Boeing/Airline procedures.

10) Replace or repair part.

11) Do the complete scan in Step (1) again to confirm the repair.

SUBTASK 26-10-00-700-019

(6) Analysis and documentation.

(a) You have now completed the wiring tester, COM-17989, diagnostic and should document your work.

1) Insert your detailed comments about the repairs performed in the wiring tester, COM-17989, test notes (optional).

2) Save the test results.

a) Click on the proper tab that best describes the diagnostic tests results.

NOTE: These comments are preset and will be correlated to the reason of your test in the Prepare for the Test Section, Step (6) (not relevant, no issue found, found my problem, potential degradation).

b) The wiring tester, COM-17989, will save it using traceability data (aircraft type, sub-system, serial number, date).

G. Put the Airplane Back to Its Usual Condition

SUBTASK 26-10-00-080-007

(1) Disconnect the wiring tester, COM-17989, from the interface cable, SPL-17990.

SUBTASK 26-10-00-080-008

(2) Disconnect the interface cable, SPL-17990, from the M237 compartment overheat detection control unit connector on the airplane.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-10-00-420-002

(3) Install the M237 compartment overheat detection control unit (TASK 26-18-01-400-801).

SUBTASK 26-10-00-840-002

(4) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE AND APU FIRE DETECTION CONTROL MODULE, M279 - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

(1) Engine and APU fire detection control module - deactivation.

(2) Engine and APU fire detection control module - activation.

TASK 26-10-01-040-801

2. Engine and APU Fire Detection Control Module - Deactivation

A. General

(1) This task will deactivate the engine and APU fire detection control module, M279.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left

C. Procedure

SUBTASK 26-10-01-020-003

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

D. Engine and APU Fire Detection Control Module - Tryout

NOTE: This tryout is to make sure that the engine and APU fire detection control module is in a zero energy state.

SUBTASK 26-10-01-210-001

(1) On the Engine and APU Fire Control Panel, P8-1, make sure that the FAULT light (Amber) is on.

SUBTASK 26-10-01-210-002

(2) On the Fire Detection Control Module, M279, in the Electrical and Electronics Compartment, make sure that these lights come on:

(a) ENGINE 1 LOOP A (Amber).

(b) ENGINE 1 LOOP B (Amber).

(c) The three FAULT CODE lights are OFF-OFF-ON

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F21810 S0006568019_V2

Engine and APU Fire Detection Control Module
Figure 201/26-10-01-990-802 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

[1] FIRE DETECTION CONTROL UNIT

B

F98200 S0006568020_V2

Engine and APU Fire Detection Control Module
Figure 201/26-10-01-990-802 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-10-01-440-801

3. **Engine and APU Fire Detection Control Module - Activation**
(Figure 201)

A. General

(1) This task will activate the engine and APU fire detection control module.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left

C. Procedure

SUBTASK 26-10-01-420-002

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE AND APU FIRE DETECTION CONTROL MODULE, M279 - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the Engine and APU Fire Detection Control Module (M279).

(2) An installation of the Engine and APU Fire Detection Control Module.

B. The Engine and APU Fire Detection Control Module is installed on the E2-2 shelf in the electronic equipment compartment.

TASK 26-10-01-000-801

2. Engine and APU Fire Detection Module Removal

(Figure 401)

A. General

(1) This task gives instructions to remove the Engine and APU Fire Detection Module.

B. References

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 201)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Prepare for the Removal

SUBTASK 26-10-01-860-001

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-10-01-010-004

(2) Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

F. Engine and APU Fire Detection Module Removal.

SUBTASK 26-10-01-020-002

(1) To remove the fire detection control unit [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F21810 S0006568019_V2

Engine and APU Fire Detection Control Unit Installation
Figure 401/26-10-01-990-801 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

[1] FIRE DETECTION CONTROL UNIT

B

F98200 S0006568020_V2

Engine and APU Fire Detection Control Unit Installation
Figure 401/26-10-01-990-801 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-10-01-400-801

3. **Engine and APU Fire Detection Module Installation**
(Figure 401)

A. **General**

(1) This task gives instructions to install the Engine and APU Fire Detection Module.

B. **References**

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 201)
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
26-15-00-710-801	APU Fire Detection - Operational Test (P/B 501)

C. **Location Zones**

Zone	Area
118	Electrical and Electronics Compartment - Right

D. **Access Panels**

Number	Name/Location
117A	Electronic Equipment Access Door

E. **Engine and APU Fire Detection Control Module Installation**

SUBTASK 26-10-01-420-001

(1) To install the module, do this task: E/E Box Installation, TASK 20-10-07-400-801.

F. **Engine and APU Fire Detection Control Unit Installation Test**

SUBTASK 26-10-01-860-003

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-10-01-710-001

(2) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

SUBTASK 26-10-01-710-002

(3) Do this task: APU Fire Detection - Operational Test, TASK 26-15-00-710-801.

G. **Put the Airplane Back to Its Usual Condition**

SUBTASK 26-10-01-010-003

(1) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE DETECTION - MAINTENANCE PRACTICES

1. **General**

A. This procedure has these tasks:

(1) Engine fire detection - deactivation.

(2) Engine fire detection - activation.

TASK 26-11-00-040-801

2. **Engine Fire Detection - Deactivation**

A. General

(1) This task will deactivate the engine fire detection system.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 26-11-00-020-002

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

D. Engine Fire Detection - Tryout

NOTE: This tryout is to make sure that the engine fire detection system is in a zero energy state.

SUBTASK 26-11-00-210-001

(1) Move and hold the TEST switch on the Engine and APU Fire Control Panel to the OVHT/FIRE position.

(a) On the Engine and APU Fire Control Panel, make sure that none of these lights come on:

1) Engine 1 Fire Handling light.

2) Engine 2 Fire Handling light.

3) ENG 1 OVERHEAT light.

4) ENG 2 OVERHEAT light.

(b) On the Pilot's Glareshield, P7, make sure that none of these lights come on:

1) The Captain's and First Officer's MASTER CAUTION lights.

2) The Captain's and First Officer's FIRE WARN lights.

3) The OVHT/DET light.

(c) Make sure that the flight compartment fire bell in the Aural Warning Module, M315, does not come on.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-11-00-210-002

(2) Release the TEST switch on the Engine and APU Fire Control Panel.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CAPTAIN'S FIRE WARNING SWITCH (P7) (FIRST OFFICER'S IS OPPOSITE)

A

CAPTAIN'S WARNING LIGHTS (P7)

B

FIRE CONTROL PANEL (P8-1)

C

G20005 S0006568026_V2

Engine Fire Detection System
Figure 201/26-11-00-990-804

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-11-00-440-801

3. Engine Fire Detection - Activation

(Figure 201)

A. General

(1) This task will activate the engine fire detection system.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Procedure

SUBTASK 26-11-00-420-002

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE DETECTION - ADJUSTMENT/TEST

1. **General**
   A. This procedure contains scheduled maintenance task data.
   B. This procedure consists of these tasks:
      (1) Engine Fire Detection - Operational Test.
      (2) Engine Fire Detection Loop Resistance - System Test.
      (3) Engine Fire Detection Circuit - System Test.

TASK 26-11-00-710-801

2. **Engine Fire Detection - Operational Test**
   (Figure 501)

A. General

(1) The Operational Test does a check of the Engine Fire Detection System without disturbing the detection system and it only uses the equipment that is on the airplane. This test will verify the circuit from the Engine and Auxiliary Power Unit (APU) Fire Control Panel, P8-1, to the Engine and APU Fire Detection Control Module, M279. The test will verify that the Engine and APU Fire Detection Control Module, which continuously monitors the detection loops, operates correctly.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Operational Test

SUBTASK 26-11-00-860-001

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-11-00-860-002

(2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-00-860-003

(3) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-11-00-710-001

(4) Make sure that the two OVHT DET switches, on the P8-1 engine and APU fire control panel, in the flight compartment are in the NORMAL positions.

E. Do the FIRE/OVHT Test

SUBTASK 26-11-00-710-002

(1) Move and hold the TEST switch, on the P8-1 engine and APU fire control panel, to the OVHT/FIRE position.

NOTE: Ignore the indication lights for the wheel well and APU detection system and the indications, on the M279 engine and APU fire detection control module, in the electronic equipment bay.

(a) On the P8-1 engine and APU fire control panel, make sure that these lights come on:

1) Engine 1 Fire Handle light (red).
2) Engine 2 Fire Handle light (red).
3) ENG 1 OVERHEAT light (amber).
4) ENG 2 OVERHEAT light (amber).

(b) On the P7 glareshield panel, make sure that these lights come on:

1) The Captain's and First Officer's MASTER CAUTION lights (amber).
2) The Captain's and First Officer's FIRE WARN lights (red).
3) The OVHT/DET light (amber).

(c) Make sure that the flight compartment fire bell, in the M315 aural warning module, comes on.

LOM 462-999

(d) Make sure that the lights on the left and right engine start levers, on the P10 engine start lever panel, come on.

LOM ALL

SUBTASK 26-11-00-710-008

(2) Push the Captain's or First Officer's FIRE WARN switch.

NOTE: If you push the either of the FIRE WARN lights, on the P7 glareshield panel, or the BELL CUTOUT switch, on the P8-1 engine and APU fire control panel, the same conditions will occur. The FIRE WARN and BELL CUTOUT switches cause the same resets but from different locations.

(a) On the P7 glareshield panel, make sure that this light goes off:

1) The Captain's and First Officer's FIRE WARN lights (red).

(b) Make sure that you do not hear the fire bell.

SUBTASK 26-11-00-710-003

(3) Release the TEST switch, on the P8-1 engine and APU fire control panel.

(a) On the P8-1 engine and APU fire control panel, make sure that these lights go off:

1) Engine 1 Fire Handle light (red).
2) Engine 2 Fire Handle light (red).
3) ENG 1 OVERHEAT light (amber).
4) ENG 2 OVERHEAT light (amber).

(b) On the P7 glareshield panel, make sure that these lights go off:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1) The Captain's and First Officer's MASTER CAUTION lights (amber).
2) The OVHT/DET light (amber).

LOM 462-999

(c) Make sure that the lights on the left and right engine start levers, on the P10 engine start lever panel, turn off.

LOM ALL

F. Do the FAULT/INOP Test

SUBTASK 26-11-00-710-004

(1) Move and hold the TEST switch, on the P8-1 engine and APU fire control panel, to the FAULT/INOP position.

NOTE: Ignore the indication lights for the APU detection system and the indications, on the M279 engine and APU fire detection control module, in the electronic equipment bay.

(a) On the P8-1 engine and APU fire control panel, make sure that these lights come on:
1) FAULT light (amber).

(b) On the P7 glareshield panel, make sure that these lights come on:
1) The Captain's and First Officer's MASTER CAUTION lights (amber).
2) The OVHT/DET light (amber).

SUBTASK 26-11-00-710-005

(2) Release the TEST switch, on the P8-1 engine and APU fire control panel.

(a) On the P8-1 engine and APU fire control panel, make sure that these lights are off:
1) FAULT light (amber).

(b) On the P7 glareshield panel, make sure that these lights are off:
1) The Captain's and First Officer's MASTER CAUTION lights (amber).
2) The OVHT/DET light (amber).

G. Do the FAULT/INOP Test from the M279 Engine and APU Fire Detection Control Module

SUBTASK 26-11-00-710-006

(1) Push and hold the FAULT/INOP TEST switch, on the M279 engine and APU fire detection control module, in the electrical and electronics compartment.

NOTE: Ignore the indications for the APU detection system and the indications that will occur in the flight compartment, on the P8-1 engine and APU fire control panel, and the P7 glareshield panel.

(a) On the M279 engine and APU fire detection control module, make sure that these lights come on:
1) ENGINE 1 LOOP A (amber).
2) ENGINE 1 LOOP B (amber).
3) ENGINE 2 LOOP A (amber).
4) ENGINE 2 LOOP B (amber).
5) The three FAULT CODE lights are ON-ON-ON.

SUBTASK 26-11-00-710-007

(2) Release the FAULT/INOP TEST switch, on the M279 engine and APU fire detection control module.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) On the M279 engine and APU fire detection control module, make sure that these lights are off:

1) ENGINE 1 LOOP A (amber).
2) ENGINE 1 LOOP B (amber).
3) ENGINE 2 LOOP A (amber).
4) ENGINE 2 LOOP B (amber).
5) The three FAULT CODE lights are OFF-OFF-OFF.

H. Put the Airplane Back to Its Usual Condition

SUBTASK 26-11-00-860-004

(1) Close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CAPTAIN'S FIRE WARNING SWITCH (P7) (FIRST OFFICER'S IS OPPOSITE)

A

CAPTAIN'S WARNING LIGHTS (P7)

B

FIRE CONTROL PANEL (P8-1)

C

G20005 S0006568026_V2

Engine Fire Detection Operational Test
Figure 501/26-11-00-990-801

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-11-00-730-801

3. Engine Fire Detection Loop Resistance - System Test
(Figure 502)

A. General

(1) The Loop Resistance Test does a check of the Engine Fire Detection Loop Circuit. It disturbs the engine fire detection system by removing the Engine and APU Fire Detection Control Module, M279 and it requires some additional test equipment.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
26-10-01-000-801	Engine and APU Fire Detection Module Removal (P/B 401)
26-10-01-400-801	Engine and APU Fire Detection Module Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Prepare for the Loop Resistance Test

SUBTASK 26-11-00-860-005

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-11-00-860-006

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-00-010-001

(3) Get access to the Electronic Equipment Bay, do this task:

Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

G. Engine Fire Detection Loop Resistance Test

SUBTASK 26-11-00-020-001

(1) Do this task: Engine and APU Fire Detection Module Removal, TASK 26-10-01-000-801.

SUBTASK 26-11-00-730-001

(2) Use a digital/analog multimeter, COM-1793 to measure the resistance across pin 25 of connector D1002 and airplane ground.

(a) Make sure the resistance is 862 ±40 ohms.

SUBTASK 26-11-00-730-002

(3) Use a digital/analog multimeter, COM-1793 to measure the resistance across pin 12 of connector D1002 and airplane ground.

(a) Make sure the resistance is 862 ±40 ohms.

SUBTASK 26-11-00-730-003

(4) Use a digital/analog multimeter, COM-1793 to measure the resistance across pin 25 of connector D998 and airplane ground.

(a) Make sure the resistance is 862 ±40 ohms.

SUBTASK 26-11-00-730-004

(5) Use a digital/analog multimeter, COM-1793 to measure the resistance across pin 12 of connector D998 and airplane ground.

(a) Make sure the resistance is 862 ±40 ohms.

SUBTASK 26-11-00-420-001

(6) Do this task: Engine and APU Fire Detection Module Installation, TASK 26-10-01-400-801.

H. Put the Airplane Back to its Usual Condition

SUBTASK 26-11-00-410-001

(1) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-11-00-860-007

(2) Close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FIRE DETECTION CONTROL UNIT

A

G20261 S0006568028_V2

Engine Fire Detection Resistance Test
Figure 502/26-11-00-990-802

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-11-00-730-802

4. Engine Fire Detection Circuit - System Test

(Figure 501, Figure 503)

A. General

(1) The Circuit Test does a check of the entire Engine Fire Detection System. It does not disturb the engine fire detection system but it does require additional test equipment.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
71-11-02-010-801-F00	Open the Fan Cowl Panels (P/B 201)
71-11-02-410-801-F00	Close the Fan Cowl Panels (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1655	Test Equipment - APU/Engine Fire Detection System Part #: C26005-1 Supplier: 81205

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
411	Engine 1 - Engine
421	Engine 2 - Engine

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Prepare for the Circuit Test

SUBTASK 26-11-00-860-008

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-11-00-860-009

(2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
D	15	C01401	LANDING GEAR AIR/GND RELAY
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6

SUBTASK 26-11-00-860-010

(3) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

SUBTASK 26-11-00-010-002

(4) Get access to the Electronic Equipment Bay, do this task:

Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 26-11-00-010-004

(5) Do this task: Open the Fan Cowl Panels, TASK 71-11-02-010-801-F00.

SUBTASK 26-11-00-730-005

(6) Make sure the two OVHT DET switches, on the Engine and APU Fire Control Panel, P8-1, are in the NORMAL positions.

SUBTASK 26-11-00-480-001

(7) On Engine 1 (2), connect the test box equipment, SPL-1655 to the two terminal lugs (A/1 and B/2) of the FAN LOWER Fire Detector, M1758, and airplane ground.

NOTE: This test is written for engine 1. The test is the same for engine 2, except as noted by the data in parenthesis. Use the data in parenthesis to do the test for engine 2.

(a) Make sure all the toggle switches on the test box are in the NORMAL positions.

(b) Connect one pair of alligator clips to each loop:

1) Connect one alligator clip to the responder bracket or to a grounding lug.

2) Connect the other alligator clip to the responder lug.

G. Do a test of the fault indication circuit

SUBTASK 26-11-00-730-006

(1) On the test box, move the ENGINE LOOP A/1 GND FAULT switch to the GND FAULT position.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) On the Engine and APU Fire Detection Control Module, M279, make sure these conditions occur:

1) The ENGINE 1 (2) LOOP A FAULT AREA light comes on.

2) The three FAULT CODE lights are OFF-ON-OFF.

SUBTASK 26-11-00-730-007

(2) On the test box, move the ENGINE LOOP B/2 GND FAULT switch to the GND FAULT position.

(a) Make sure the FAULT light on the Engine and APU Fire Control Panel, P8-1, comes on.

(b) On the Engine and APU Fire Detection Control Module, M279, make sure these conditions occur:

1) The ENGINE 1 (2) LOOP A FAULT AREA light comes on.

2) The ENGINE 1 (2) LOOP B FAULT AREA light comes on.

3) The three FAULT CODE lights are OFF-ON-OFF.

SUBTASK 26-11-00-730-008

(3) On the test box, move the ENGINE LOOP A/1 AND B/2 GND FAULT switches to the NORMAL position.

(a) Make sure the FAULT light on the Engine and APU Fire Control Panel, P8-1, goes off.

(b) On the Engine and APU Fire Detection Control Module, M279, make sure these conditions occur:

1) The ENGINE 1 (2) LOOP A FAULT AREA light goes off.

2) The ENGINE 1 (2) LOOP B FAULT AREA light goes off.

3) The three FAULT CODE lights are OFF-OFF-OFF.

H. Do a test of the overheat indication circuit

SUBTASK 26-11-00-730-009

(1) On the test box, move the ENGINE LOOP A/1 AND B/2 OVHT switches to the OVHT position.

(a) Make sure the ENG 1 (2) OVERHEAT light on the Engine and APU Fire Control Panel, P8-1, comes on.

(b) On the Pilot's Glareshield, P7, make sure these conditions occur:

1) The Captain and First Officer's MASTER CAUTION lights come on.

2) The OVHT DET light comes on.

SUBTASK 26-11-00-730-010

(2) On the test box, move the ENGINE LOOP A/1 AND B/2 OVHT switches to the NORMAL position.

(a) Make sure the ENG 1 (2) OVERHEAT light on the Engine and APU Fire Control Panel, P8-1, goes off.

(b) On the Pilot's Glareshield, P7, make sure these conditions occur:

1) The Captain and First Officer's MASTER CAUTION lights goes off.

2) The OVHT DET light goes off.

I. Do a test of the fire indication circuit

SUBTASK 26-11-00-730-011

(1) On the test box, move the ENGINE LOOP A/1 AND B/2 FIRE switches to the FIRE position.

(a) Make sure the engine 1 (2) Fire Handle light, on the Engine and APU Fire Control Panel, P8-1, comes on.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) On the Pilot's Glareshield, P7, make sure these conditions occur:

1) The Captain and First Officer's MASTER CAUTION lights come on.

2) The Captain and First Officer's FIRE WARN lights comes on.

(c) Make sure the flight compartment fire bell, on the Aural Warning Module, M315, comes on.

LOM 462-999

(d) Make sure the lights on the left and right Engine Start Levers, on the Engine Start Lever Panel, P10, come on.

LOM ALL

SUBTASK 26-11-00-730-012

(2) On the test box, move the ENGINE LOOP A/1 AND B/2 FIRE switches to the NORMAL position.

(a) Make sure the engine 1 (2) Fire Handle light, on the Engine and APU Fire Control Panel, P8-1, goes off.

(b) On the Pilot's Glareshield, P7, make sure these conditions occur:

1) The Captain and First Officer's MASTER CAUTION lights goes off.

2) The Captain and First Officer's FIRE WARN lights goes off.

(c) Make sure the flight compartment fire bell, on the Aural Warning Module, M315, stops.

LOM 462-999

(d) Make sure the lights on the left and right Engine Start Levers, on the Engine Start Lever Panel, P10, turn off.

LOM ALL

SUBTASK 26-11-00-480-002

(3) On Engine 1 (2), disconnect the test box equipment, SPL-1655 from the two terminal lugs (A/1 and B/2) of the FAN LOWER Fire Detector, M1758, and airplane ground.

SUBTASK 26-11-00-730-013

(4) Make sure you do the circuit test for engine 1 and engine 2.

J. Put the airplane back to its usual condition.

SUBTASK 26-11-00-410-003

(1) Do this task: Close the Fan Cowl Panels, TASK 71-11-02-410-801-F00.

SUBTASK 26-11-00-410-002

(2) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

SUBTASK 26-11-00-860-011

(3) Close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Engine Fire Detection Circuit Test
Figure 503/26-11-00-990-803 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

B

G20214 S0006568031_V2

Engine Fire Detection Circuit Test
Figure 503/26-11-00-990-803 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE DETECTORS - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the engine fire detector elements.

(2) An installation of the engine fire detector elements.

(3) A removal of the engine fire detector assemblies.

(4) An installation of the engine fire detector assemblies.

B. There are four different fire detectors on each engine. One is installed in the upper fan area. One is installed in the lower fan area. One is installed in the left engine core. One is installed in the right engine core. All of the engine fire detectors are dual loop detectors. Each fire detector assembly has two elements which you can remove separately. The removal and installation procedures are similar for each fire detector assembly or element.

TASK 26-11-01-000-801

2. Engine Fire Detector Element Removal

(Figure 401, Figure 402, Figure 403, and Figure 404)

A. References

Reference	Title
71-11-02-010-801-F00	Open the Fan Cowl Panels (P/B 201)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)

B. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

C. Prepare for the Removal

SUBTASK 26-11-01-010-001

(1) To access the fan fire detector assemblies, do this task: Open the Fan Cowl Panels, TASK 71-11-02-010-801-F00.

SUBTASK 26-11-01-010-002

WARNING

DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) To access the core fire detection procedure, do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

D. Fire Detector Element Removal

SUBTASK 26-11-01-860-001

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-01-020-001

(2) To remove the element [6] from the upper fan fire detector assembly [1], do these steps (Figure 401):

(a) Remove the nut [2] and washer [3] from the terminal.

1) Disconnect the leads [4] from the terminal.

(b) Loosen the bolt [8] on each applicable clamp [7].

(c) For the fire detector with the mounting strap [18], remove the four nuts [17], two strap clamps [16], four washers [15], four screws [14], and mounting strap [18].

(d) For the fire detector with the two clamps [19], remove the four nuts [17], two strap clamps [16], four washers [15], four screws [14], and two clamps [19].

(e) Remove the element [6] form the clamps [7].

CAUTION BE CAREFUL WHEN YOU REMOVE OR INSTALL THE GROMMETS INTO THE ELEMENTS OF THE FIRE DETECTOR FOR THE ENGINE. IF YOU DO NOT OBEY, DAMAGE TO THE ELEMENTS CAN OCCUR.

(f) Remove the grommets [9] from the element [6] to use on the new element.

(g) Remove the element [6].

SUBTASK 26-11-01-020-005

(3) To remove the element [6] from the lower fan fire detector assembly [21], do these steps (Figure 402):

(a) Remove the nut [2] and washer [3] from the terminal.

1) Disconnect the leads [4] from the terminal.

(b) Loosen the bolt [8] on each applicable clamp [7].

(c) For the fire detector with the mounting strap [18], remove the four nuts [17], two strap clamps [16], four washers [15], four screws [14], and mounting strap [18].

(d) For the fire detector with the two clamps [19], remove the four nuts [17], two strap clamps [16], four washers [15], four screws [14], and two clamps [19].

(e) Remove the element [6] form the clamp [7].

CAUTION BE CAREFUL WHEN YOU REMOVE OR INSTALL THE GROMMETS INTO THE ELEMENTS OF THE FIRE DETECTOR FOR THE ENGINE. IF YOU DO NOT OBEY, DAMAGE TO THE ELEMENTS CAN OCCUR.

(f) Remove the grommets [9] from the element [6] to use on the new element.

(g) Remove the element [6].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-11-01-020-006

(4) To remove the element [6] from the right core fire detector assembly [22], do these steps (Figure 403):

LOM ALL POST SB 737-CFM56-7B-72-0981

(a) Remove the nut [29], screw [25], lead [26], and clamp [27] from the bracket [28].

LOM ALL

(b) Remove the nut [23] and washer [3] from the terminal.

LOM ALL PRE SB 737-CFM56-7B-72-0759

1) Disconnect the leads [4] from the terminal.

LOM ALL

2) Disconnect the lead [4] from the terminal.

(c) Loosen the bolt [8] on each applicable clamp [7].

(d) Loosen the bolt [8] on the clamp [30].

(e) For the fire detector with the mounting strap [18], remove the four nuts [17], two strap clamps [16], four washers [15], four screws [14], and mounting strap [18].

(f) For the fire detector with the two clamps [19], remove the four nuts [17], two strap clamps [16], four washers [15], four screws [14], and two clamps [19].

(g) Remove the element [6] form the clamp [7].

CAUTION

BE CAREFUL WHEN YOU REMOVE OR INSTALL THE GROMMETS INTO THE ELEMENTS OF THE FIRE DETECTOR FOR THE ENGINE. IF YOU DO NOT OBEY, DAMAGE TO THE ELEMENTS CAN OCCUR.

(h) Remove the grommets [9] from the element [6] to use on the new element.

(i) Remove the element [6].

SUBTASK 26-11-01-020-007

(5) To remove the element [6] from the left core fire detector assembly [31], do these steps (Figure 404):

LOM ALL POST SB 737-CFM56-7B-72-0981

(a) Remove the nut [29], screw [25], lead [26], and clamp [27] from the bracket [28].

LOM ALL

(b) Remove the nut [23] and washer [3] from the terminal.

LOM ALL PRE SB 737-CFM56-7B-72-0759

1) Disconnect the leads [4] from the terminal.

LOM ALL

2) Disconnect the lead [4] from the terminal.

(c) Loosen the bolt [8] on each applicable clamp [7].

(d) For the fire detector with the mounting strap [18], remove the four nuts [17], two strap clamps [16], four washers [15], four screws [14], and mounting strap [18].

(e) For the fire detector with the two clamps [19], remove the four nuts [17], two strap clamps [16], four washers [15], four screws [14], and two clamps [19].

(f) Remove the element [6] form the clamp [7].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CAUTION

BE CAREFUL WHEN YOU REMOVE OR INSTALL THE GROMMETS INTO THE ELEMENTS OF THE FIRE DETECTOR FOR THE ENGINE. IF YOU DO NOT OBEY, DAMAGE TO THE ELEMENTS CAN OCCUR.

(g) Remove the grommets [9] from the element [6] to use on the new element.

(h) Remove the element [6].

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Engine Upper Fan Fire Detectors Installation
Figure 401/26-11-01-990-803 (Sheet 1 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1 SEPARATE WIRES AS MUCH AS POSSIBLE. BEND DOWN AND AWAY FROM CONTACT WITH STRUT BLANKET. ADJUST THE WIRES AND SECURE PER SWPM 20-10-11 TO ACHIEVE A MINIMUM CLEARANCE OF 0.15 INCHES (3.81 mm) BETWEEN THE FIRE DETECTION WIRES AND THE STRUT INSULATION BLANKET.

F22178 S0006568040_V11

Engine Upper Fan Fire Detectors Installation
Figure 401/26-11-01-990-803 (Sheet 2 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2 POSITION LEADS APPROXIMATELY AS SHOWN AND TIE WRAP WIRES AS REQUIRED TO MAINTAIN THIS POSITION.

3014026 S0000787543_V1

Engine Upper Fan Fire Detectors Installation
Figure 401/26-11-01-990-803 (Sheet 3 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F20138 S0006568036_V4

Engine Lower Fan Fire Detectors Installation
Figure 402/26-11-01-990-804 (Sheet 1 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1 POSITION LEADS APPROXIMATELY AS SHOWN AND TIE WRAP WIRES AS REQUIRED TO MAINTAIN THIS POSITION

3014170 S0000787544_V2

Engine Lower Fan Fire Detectors Installation
Figure 402/26-11-01-990-804 (Sheet 2 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(FIRE DETECTOR WITH MOUNTING STRAP)
(EXAMPLE)

F

(FIRE DETECTOR WITH CLAMPS)
(EXAMPLE)

F

3014171 S0000787545_V1

Engine Lower Fan Fire Detectors Installation
Figure 402/26-11-01-990-804 (Sheet 3 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F20136 S0006568037_V4

Engine Right Core Fire Detectors Installation
Figure 403/26-11-01-990-805 (Sheet 1 of 8)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

3014195 S0000787546_V1

Engine Right Core Fire Detectors Installation
Figure 403/26-11-01-990-805 (Sheet 2 of 8)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1 ENSURE WIRE BEND RADIUS IS GREATER THAN 0.59 INCH (15 mm)

3014212 S0000787547_V1

Engine Right Core Fire Detectors Installation
Figure 403/26-11-01-990-805 (Sheet 3 of 8)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1 ENSURE WIRE BOND RADIUS IS GREATER THAN 0.59 INCH (15 mm)

3014357 S0000787968_V1

Engine Right Core Fire Detectors Installation
Figure 403/26-11-01-990-805 (Sheet 4 of 8)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Engine Right Core Fire Detectors Installation
Figure 403/26-11-01-990-805 (Sheet 5 of 8)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

E 2

E 3

F

2 LEAD IS PARALLEL WITH THE CLAMP ±5˚.

3 LEAD IS ROTATED 30 DEGREES COUNTERCLOCKWISE FROM ITS PARALLEL POSITION WITH THE CLAMP.

2952694 S0000729818_V3

Engine Right Core Fire Detectors Installation
Figure 403/26-11-01-990-805 (Sheet 6 of 8)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

3014223 S0000787549_V1

Engine Right Core Fire Detectors Installation
Figure 403/26-11-01-990-805 (Sheet 7 of 8)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

H

(EXAMPLE)

I

J

3014230 S0000787550_V1

Engine Right Core Fire Detectors Installation
Figure 403/26-11-01-990-805 (Sheet 8 of 8)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F22155 S0006568038_V4

Engine Left Core Fire Detectors Installation
Figure 404/26-11-01-990-806 (Sheet 1 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F22166 S0006568039_V4

Engine Left Core Fire Detectors Installation
Figure 404/26-11-01-990-806 (Sheet 2 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

3014246 S0000787553_V1

Engine Left Core Fire Detectors Installation
Figure 404/26-11-01-990-806 (Sheet 3 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1 ENSURE WIRE BEND RADIUS IS GREATER THAN 0.59 INCH (15 mm)

3014263 S0000787554_V1

Engine Left Core Fire Detectors Installation
Figure 404/26-11-01-990-806 (Sheet 4 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1 ENSURE WIRE BOND RADIUS IS GREATER THAN 0.59 INCH (15 mm)

2952334 S0000729817_V2

Engine Left Core Fire Detectors Installation
Figure 404/26-11-01-990-806 (Sheet 5 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Engine Left Core Fire Detectors Installation
Figure 404/26-11-01-990-806 (Sheet 6 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-11-01-400-801

3. Engine Fire Detector Element Installation

(Figure 401, Figure 402, Figure 403, and Figure 404)

A. References

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
71-11-02-010-801-F00	Open the Fan Cowl Panels (P/B 201)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
SWPM 20-10-11	WIRING ASSEMBLY AND INSTALLATION CONFIGURATION
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

C. Consumable Materials

Reference	Description	Specification
B00083	Solvent - VM&P Naphthas	TT-N-95 Type II, ASTM D-3735 Type III
D50183	Compound - Thread Anti-Seize - Graphite-Petrolatum	AMS 2518 (Replaces MIL-T-5544)

D. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

E. Prepare for the Installation

SUBTASK 26-11-01-010-003

(1) To access the fan fire detector assemblies, do this task: Open the Fan Cowl Panels, TASK 71-11-02-010-801-F00.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-11-01-010-004

> **WARNING**
> DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) To access the core fire detection procedure, do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

F. Fire Detector Element Installation

SUBTASK 26-11-01-420-005

(1) Do these steps to install the element [6] for the upper fan fire detector assembly [1] (Figure 401):

(a) Position the element [6] along the support tube [10].

(b) For the fire detector with the mounting strap [18], do these steps (View G, Figure 401):

1) Install the mounting strap [18] in the correct position on the mounting bracket.

2) Install the four screws [14], four washers [15], two strap clamps [16], and four nuts [17].

3) Tighten the four nuts [17] to 30 in-lb (3 N·m) - 35 in-lb (4 N·m).

(c) For the fire detector with the two clamps [19], do these steps (View G, Figure 401):

1) Install the two strap clamps [16] in the correct position on the mounting bracket.

2) Install the four screws [14], four washers [15], two strap clamps [16], and four nuts [17].

3) Tighten the four nuts [17] to 30 in-lb (3.4 N·m) - 35 in-lb (4.0 N·m).

> **CAUTION**
> BE CAREFUL WHEN YOU REMOVE OR INSTALL THE GROMMETS INTO THE ELEMENTS OF THE FIRE DETECTOR FOR THE ENGINE. IF YOU DO NOT OBEY, DAMAGE TO THE ELEMENTS CAN OCCUR.

(d) Put the grommets [9] on the element [6] at each clamp [7] location (View D, Figure 401).

(e) Put the element [6] into each clamp [7].

(f) Make sure that the end of the element [6] extends less than 1 in. (2.54 cm) past the last element [6].

1) If the element [6] extends more than 1 in. (2.54 cm), adjust the length of the element [6] between each clamp [7] so that any slack is evenly distributed.

(g) Make sure that there is at least 0.12 in. (3.0 mm) between the element [6] and support tube [10].

(h) Apply thread compound, D50183, on the threads of the bolts [8].

(i) Tighten the bolt [8] on each applicable clamp [7] until 1-1/2 to 3 threads extend through the nut of the clamp [7] base.

1) Make sure that the grommets [9] and clamps [7] are tight.

2) Make sure that the ends of the bolts [8] do not touch the support tube [10].

(j) Separate the wires as much as possible.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(k) Bend the wires down and away from contact with the strut blanket.

(l) For the fire detector harness, MW0316, do these steps:

1) Achieve the minimum clearance of 0.15 in. (3.81 mm) between the fire detection wires and strut insulation blanket, do the following steps:

a) Adjust the wires.

b) Secure per SWPM 20-10-11.

(m) For the top fire detector, install the leads [4] as follows (View B, Figure 401):

NOTE: If the leads are different sizes, install the lead with the small hole on top of the large hole.

1) Install the leads [4], washer [3], and nut [2].

a) Make sure that the distance between the leads [4] is approximately 150 degrees.

b) Tighten the nut [2] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

(n) For the bottom fire detector, install the leads [4] as follows: approximately as shown (View F, Figure 401).

NOTE: If the leads are different sizes, install the lead with the small hole on top of the large hole.

1) Install the leads [4], washer [3], and nut [2].

a) Make sure that the leads [4] are positioned approximately as shown.

b) Tighten the nut [2] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

SUBTASK 26-11-01-420-006

(2) Do these steps to install the element [6] for the lower fan fire detector assembly [21] (Figure 402):

(a) Position the element [6] along the support tube [10].

(b) For the fire detector with the mounting strap [18], do these steps (View F, Figure 402):

1) Install the mounting strap [18] in the correct position on the mounting bracket.

2) Install the four screws [14], four washers [15], two strap clamps [16], and four nuts [17].

3) Tighten the four nuts [17] to 30 in-lb (3 N·m) - 35 in-lb (4 N·m).

(c) For the fire detector with the two clamps [19], do these steps (View F, Figure 402):

1) Install the two strap clamps [16] in the correct position on the mounting bracket.

2) Install the four screws [14], four washers [15], two strap clamps [16], and four nuts [17].

3) Tighten the four nuts [17] to 30 in-lb (3.4 N·m) - 35 in-lb (4.0 N·m).

CAUTION

BE CAREFUL WHEN YOU REMOVE OR INSTALL THE GROMMETS INTO THE ELEMENTS OF THE FIRE DETECTOR FOR THE ENGINE. IF YOU DO NOT OBEY, DAMAGE TO THE ELEMENTS CAN OCCUR.

(d) Put the grommets [9] on the element [6] at each clamp [7] location (View D, Figure 402).

(e) Put the element [6] into each clamp [7].

(f) Make sure that the end of the element [6] extends less than 1 in. (2.54 cm) past the last element [6].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1) If the element [6] extends more than 1 in. (2.54 cm) , adjust the length of the element [6] between each clamp [7] so that any slack is evenly distributed.

(g) Make sure that there is at least 0.12 in. (3.0 mm) between the element [6] and support tube [10].

(h) Apply thread compound, D50183, on the threads of the bolts [8].

(i) Tighten the bolt [8] on each applicable clamp [7] until 1-1/2 to 3 threads extend through the nut of the clamp [7] base.

1) Make sure that the grommets [9] and clamps [7] are tight.

2) Make sure that the ends of the bolts [8] do not touch the support tube [10].

(j) Separate the wires as much as possible.

(k) Bend the wires down and away from contact with the strut blanket.

(l) Install the leads [4] as follows (Views B and C, Figure 402):

NOTE: If the leads are different sizes, install the lead with the small hole on top of the large hole.

1) Install the leads [4], washer [3], and nut [2].

a) Make sure that the leads [4] are positioned approximately as shown.

b) Tighten the nut [2] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

SUBTASK 26-11-01-420-007

(3) Do these steps to install the element [6] for the right core fire detector assembly [22] (Figure 403):

(a) Position the element [6] along the support tube [10].

(b) For the fire detector with the mounting strap [18], do these steps:

1) Install the mounting strap [18] in the correct position on the mounting bracket (View G, Figure 403).

LOM ALL POST SB 737-CFM56-7B-72-0981

2) Install the bracket [28] in the correct position on the mounting strap [18] (View C, Figure 403).

LOM ALL

3) Install the four screws [14], four washers [15], two strap clamps [16], and four nuts [17].

4) Tighten the four nuts [17] to 30 in-lb (3 N·m) - 35 in-lb (4 N·m).

(c) For the fire detector with the two clamps [19], do these steps (View G, Figure 403):

1) Install the two strap clamps [16] in the correct position on the mounting bracket.

2) Install the four screws [14], four washers [15], two strap clamps [16], and four nuts [17].

3) Tighten the four nuts [17] to 30 in-lb (3.4 N·m) - 35 in-lb (4.0 N·m).

CAUTION

BE CAREFUL WHEN YOU REMOVE OR INSTALL THE GROMMETS INTO THE ELEMENTS OF THE FIRE DETECTOR FOR THE ENGINE. IF YOU DO NOT OBEY, DAMAGE TO THE ELEMENTS CAN OCCUR.

(d) Put the grommets [9] on the element [6] at each clamp [7] location (View H, Figure 403).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CAUTION BE CAREFUL WHEN YOU REMOVE OR INSTALL THE GROMMETS INTO THE ELEMENTS OF THE FIRE DETECTOR FOR THE ENGINE. IF YOU DO NOT OBEY, DAMAGE TO THE ELEMENTS CAN OCCUR.

(e) Put the grommet [9] on the element [6] at clamp [30] location (View J, Figure 403).

(f) Put the element [6] into each clamp [7].

(g) Put the element [6] into clamp [30].

(h) Make sure that the end of the element [6] extends less than 1 in. (2.54 cm) past the last element [6].

1) If the element [6] extends more than 1 in. (2.54 cm) , adjust the length of the element [6] between each clamp [7] so that any slack is evenly distributed.

(i) Make sure that there is at least 0.12 in. (3.0 mm) between the element [6] and support tube [10].

(j) Apply thread compound, D50183, on the threads of the bolts [8].

(k) Tighten the bolt [8] on each applicable clamp [7] and clamp [30] until 1-1/2 to 3 threads extend through the nut.

1) Make sure that the grommets [9] and clamps [7], element [6] and clamp [30] are tight.

2) Make sure that the ends of the bolts [8] do not touch the support tube [10].

(l) Separate the wires as much as possible.

(m) Bend the wires down and away from contact with the strut blanket.

LOM ALL PRE SB 737-CFM56-7B-72-0759

(n) Install the leads [4] as follows (Views B and C, Figure 403):

NOTE: If the leads are different sizes, install the lead with the small hole on top of the large hole.

1) Install the leads [4], washer [3], and nut [23].

a) Make sure that the distance between the leads [4] is 0.380 in. (9.652 mm) - 0.500 in. (12.700 mm).

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

LOM ALL POST SB 737-CFM56-7B-72-0759 OR PRE SB 737-CFM56-7B-72-0981

(o) Install the lead [4] as follows (Views B and C, Figure 403):

1) Install the lead [4], washer [3], and nut [23].

a) Make sure that the wire bend radius is greater than 0.59 in. (15.0 mm).

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

LOM ALL POST SB 737-CFM56-7B-72-0981

(p) Install the lead [4] and lead [26] as follows (Figure 403):

1) Install the lead [4], washer [3], and nut [23] to the terminal.

a) Make sure that the wire bend radius is greater than 0.59 in. (15.0 mm).

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-462 PRE SB 737-26-1142 AND POST SB 737-CFM56-7B-72-0981

2) Install the screw [25], lead [26], clamp [27], and nut [29] to the bracket [28].

a) Tighten the nut [29] to 34 in-lb (3.8 N·m) - 36 in-lb (4.1 N·m).

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-462 POST SB 737-26-1142 AND POST SB 737-CFM56-7B-72-0981; LOM 463-999 POST SB 737-CFM56-7B-72-0981

3) Install the clamp [27] and lead [26] to the bracket [28].

a) Make sure that the lead [26] for the is parallel with the bracket [28] (View E, Figure 403).

<1> If the ground wire loop is still large, do this step (View F, Figure 403):

<a> Rotate the lead [26] up to 30 degrees counterclockwise from its parallel position with the clamp [27] (View E, Figure 403).

NOTE: The most effective range for the lead position to minimize the ground wire loop and to prevent ground wire damage is between its parallel position with the clamp and 30 degrees counterclockwise from its parallel position.

<2> If the ground wire loop is still large, do these steps:

<a> Move the lead [26] counterclockwise in increments of 10 degrees until the ground wire loop is minimized.

<b> If you observe the tension in the ground wire, do not continue to move the lead [26].

b) Tighten the nut [29] to 34 in-lb (3.8 N·m) - 36 in-lb (4.1 N·m).

LOM ALL

SUBTASK 26-11-01-420-008

(4) Do these steps to install the element [6] for the left core fire detector assembly [31] (Figure 404):

(a) Position the element [6] along the support tube [10].

(b) For the fire detector with the mounting strap [18], do these steps (View H, Figure 404):

1) Install the mounting strap [18] in the correct position on the mounting bracket.

2) Install the four screws [14], four washers [15], two strap clamps [16], and four nuts [17].

3) Tighten the four nuts [17] to 30 in-lb (3 N·m) - 35 in-lb (4 N·m).

(c) For the fire detector with the two clamps [19], do these steps (View H, Figure 404):

1) Install the two strap clamps [16] in the correct position on the mounting bracket.

2) Install the four screws [14], four washers [15], two strap clamps [16], and four nuts [17].

3) Tighten the four nuts [17] to 30 in-lb (3.4 N·m) - 35 in-lb (4.0 N·m).

CAUTION

BE CAREFUL WHEN YOU REMOVE OR INSTALL THE GROMMETS INTO THE ELEMENTS OF THE FIRE DETECTOR FOR THE ENGINE. IF YOU DO NOT OBEY, DAMAGE TO THE ELEMENTS CAN OCCUR.

(d) Put the grommets [9] on the element [6] at each clamp [7] location (View F, Figure 404).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(e) Put the element [6] into each clamp [7].

(f) Make sure that the end of the element [6] extends less than 1 in. (2.54 cm) past the last element [6].

1) If the element [6] extends more than 1 in. (2.54 cm) , adjust the length of the element [6] between each clamp [7] so that any slack is evenly distributed.

(g) Make sure that there is at least 0.12 in. (3.0 mm) between the element [6] and support tube [10].

(h) Apply thread compound, D50183, on the threads of the bolts [8].

(i) Tighten the bolt [8] on each applicable clamp [7] until 1-1/2 to 3 threads extend through the nut of the clamp [7] base.

1) Make sure that the grommets [9] and clamps [7] are tight.

2) Make sure that the ends of the bolts [8] do not touch the support tube [10].

(j) Separate the wires as much as possible.

(k) Bend the wires down and away from contact with the strut blanket.

LOM ALL PRE SB 737-CFM56-7B-72-0759

(l) Install the leads [4] as follows (Views C and D, Figure 404):

NOTE: If the leads are different sizes, install the lead with the small hole on top of the large hole.

1) Install the leads [4], washer [3], and nut [23].

a) Make sure that the distance between the leads [4] is 0.380 in. (9.652 mm) - 0.500 in. (12.700 mm).

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

LOM ALL POST SB 737-CFM56-7B-72-0759 OR PRE SB 737-CFM56-7B-72-0981

(m) Install the lead [4] as follows (Views C and D, Figure 404):

1) Install the lead [4], washer [3], and nut [23].

a) Make sure that the wire bend radius is greater than 0.59 in. (15.0 mm).

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

LOM ALL POST SB 737-CFM56-7B-72-0981

(n) Install the lead [4] and lead [26] as follows (Views C and D, Figure 404):

1) Install the lead [4], washer [3], and nut [23] to the terminal.

a) Make sure that the wire bend radius is greater than 0.59 in. (15.0 mm).

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

2) Install the screw [25], lead [26], clamp [27], and nut [29] to the bracket [28].

a) Tighten the nut [29] to 34 in-lb (3.8 N·m) - 36 in-lb (4.1 N·m).

LOM ALL

SUBTASK 26-11-01-280-001

(5) Measure the electrical bonding resistance between the mounting strap [18] or clamp [19] and airplane structure (SWPM 20-20-00).

(a) Use an intrinsically safe approved bonding meter, COM-1550.

(b) Make sure that the electrical bonding resistance is 0.010 ohm (10 milliohm) or less.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(c) If the resistance is more than 0.010 ohm (10 milliohm), clean the bonding surfaces with solvent, B00083, and do the check again.

SUBTASK 26-11-01-860-002

(6) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

G. Engine Fire Detector Element Installation Test

SUBTASK 26-11-01-710-001

(1) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

END OF TASK

TASK 26-11-01-000-802

4. Engine Fire Detector Assembly Removal

(Figure 401, Figure 402, Figure 403, and Figure 404)

A. References

Reference	Title
71-11-02-010-801-F00	Open the Fan Cowl Panels (P/B 201)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)

B. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

C. Prepare for the Removal

SUBTASK 26-11-01-010-005

(1) To access the fan fire detector assemblies, do this task: Open the Fan Cowl Panels, TASK 71-11-02-010-801-F00.

SUBTASK 26-11-01-010-006

WARNING

DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) To access the core fire detection procedure, do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

D. Fire Detector Assembly Removal

SUBTASK 26-11-01-860-003

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-01-020-002

(2) Do these steps to remove the upper fan fire detector assembly [1] (Figure 401):

NOTE: The fire detector assembly includes the support tubes with the fire detector elements installed and the mounting hardware.

(a) Remove the nuts [2] and washers [3] from the terminal.

1) Disconnect the leads [4] from the terminal.

(b) Remove the bolts [11] from the clamps [13] that hold the support tube [10] in its position.

(c) Remove the bolts [5] that hold the fire detector in its position.

(d) Remove the upper fan fire detector assembly [1].

SUBTASK 26-11-01-020-008

(3) Do these steps to remove the lower fan fire detector assembly [21] (Figure 402):

NOTE: The fire detector assembly includes the support tubes with the fire detector elements installed and the mounting hardware.

(a) Remove the nuts [2] and washers [3] from the terminal.

1) Disconnect the leads [4] from the terminal.

(b) Remove the bolts [11] from the clamps [13] that hold the support tube [10] in its position.

(c) Remove the bolts [5] that hold the fire detector in its position.

(d) Remove the lower fan fire detector assembly [21].

SUBTASK 26-11-01-020-009

(4) Do these steps to remove the right core fire detector assembly [22] (Figure 403):

NOTE: The fire detector assembly includes the support tubes with the fire detector elements installed and the mounting hardware.

LOM ALL POST SB 737-CFM56-7B-72-0981

(a) Remove the nut [29], screw [25], lead [26], and clamp [27] from the bracket [28].

LOM ALL

(b) Remove the nut [23] and washer [3] from the terminal.

LOM ALL PRE SB 737-CFM56-7B-72-0759

1) Disconnect the leads [4] from the terminal.

LOM ALL

2) Disconnect the lead [4] from the terminal.

(c) Remove the bolts [11] from the clamps [13] that hold the support tube [10] in its position.

(d) Remove the bolts [20] that hold the top fire detector in its position.

(e) Remove the bolts [24] that hold the bottom fire detector in its position.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(f) Remove the right core fire detector assembly [22].

SUBTASK 26-11-01-020-010

(5) Do these steps to remove the left core fire detector assembly [31] (Figure 404):

NOTE: The fire detector assembly includes the support tubes with the fire detector elements installed and the mounting hardware.

LOM ALL POST SB 737-CFM56-7B-72-0981

(a) Remove the nut [29], screw [25], lead [26], and clamp [27] from the bracket [28].

LOM ALL

(b) Remove the nut [23] and washer [3] from the terminal.

LOM ALL PRE SB 737-CFM56-7B-72-0759

1) Disconnect the leads [4] from the terminal.

LOM ALL

2) Disconnect the lead [4] from the terminal.

(c) Remove the bolts [11] from the clamps [13] that hold the support tube [10] in its position.

(d) Remove the bolts [24] that hold the fire detector in its position.

(e) Remove the left core fire detector assembly [31].

END OF TASK

TASK 26-11-01-400-802

5. Engine Fire Detector Assembly Installation

(Figure 401, Figure 402, Figure 403, and Figure 404)

A. References

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
71-11-02-010-801-F00	Open the Fan Cowl Panels (P/B 201)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
SWPM 20-10-11	WIRING ASSEMBLY AND INSTALLATION CONFIGURATION
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

ECCN 9E991 BOEING PROPRIETARY - See title page for details

C. Consumable Materials

Reference	Description	Specification
B00083	Solvent - VM&P Naphthas	TT-N-95 Type II, ASTM D-3735 Type III
D00006	Compound - Antiseize, Pure Nickel Special - Never-Seez NSBT-8N/-16N	

D. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

E. Prepare for the Installation

SUBTASK 26-11-01-010-007

(1) To access the fan fire detector assemblies, do this task: Open the Fan Cowl Panels, TASK 71-11-02-010-801-F00.

SUBTASK 26-11-01-010-008

WARNING

DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) To access the core fire detection procedure, do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

F. Fire Detector Assembly Installation

SUBTASK 26-11-01-420-009

(1) Do these steps to install the upper fan fire detector assembly [1] (Figure 401):

(a) Make sure that the ends of the upper fan fire detector assembly [1] and brackets are clean.

(b) Position the upper fan fire detector assembly [1] on the engine.

(c) Make sure that the preload between the upper fan fire detector assembly [1] and attach points is not more than 10 lbf (44.48 N).

(d) Install the bolts [5] that hold the upper fan fire detector assembly [1] to the engine.

1) Tighten the bolts [5] to 78 in-lb (8.8 N·m) - 82 in-lb (9.3 N·m).

(e) Apply Pure Nickel Special compound, D00006, under the heads of the bolts [11].

(f) Install the bolts [11] at each applicable clamp [13] location along the support tube [10] (View E, Figure 401).

1) Make sure that the sleeve [12] is installed.

2) Tighten the bolts [11] to 73 in-lb (8.25 N·m) - 77 in-lb (8.70 N·m).

(g) Make sure that there is at least 0.12 in. (3 mm) between the elements [6] and support tube [10].

(h) For the top fire detector harness, MW0316, do these steps:

1) Achieve the minimum clearance of 0.15 in. (3.81 mm) between the fire detection wires and strut insulation blanket, do the following steps:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

a) Adjust the wires.

b) Secure per SWPM 20-10-11.

(i) For the top fire detector, install the leads [4] as follows (View B, Figure 401):

NOTE: If the leads are different sizes, install the lead with the small hole on top of the large hole.

1) Install the leads [4], washer [3], and nut [2].

a) Make sure that the distance between the leads [4] is approximately 150 degrees.

b) Tighten the nut [2] to 25 in-lb (2.8 N·m) - 35 in-lb (4 N·m).

(j) For the bottom fire detector, install the leads [4] as follows:

NOTE: If the leads are different sizes, install the lead with the small hole on top of the large hole.

1) Install the leads [4], washer [3], and nut [2].

a) Make sure that the leads [4] are positioned approximately as shown (View F, Figure 401).

b) Tighten the nut [2] to 25 in-lb (2.8 N·m) - 35 in-lb (4 N·m).

SUBTASK 26-11-01-420-010

(2) Do these steps to install the lower fan fire detector assembly [21] (Figure 402):

(a) Make sure that the ends of the lower fan fire detector assembly [21] and brackets are clean.

(b) Position the lower fan fire detector assembly [21] on the engine.

(c) Make sure that the preload between the lower fan fire detector assembly [21] and attach points is not more than 10 lbf (44.48 N).

(d) Install the bolts [5] that hold the lower fan fire detector assembly [21] to the engine.

1) Tighten the bolts [5] to 78 in-lb (8.8 N·m) - 82 in-lb (9.3 N·m).

I (e) Apply Pure Nickel Special compound, D00006, under the heads of the bolts [11].

(f) Install the bolts [11] at each applicable clamp [13] location along the support tube [10] (View E, Figure 402).

1) Make sure that the sleeve [12] is installed.

2) Tighten the bolts [11] to 73 in-lb (8.25 N·m) - 77 in-lb (8.70 N·m).

(g) Make sure that there is at least 0.12 in. (3 mm) between the elements [6] and support tube [10].

(h) Install the leads [4] as follows (Views B and C, Figure 402):

NOTE: If the leads are different sizes, install the lead with the small hole on top of the large hole.

1) Install the leads [4], washer [3], and nut [2].

a) Make sure that the leads [4] are positioned approximately as shown.

b) Tighten the nut [2] to 25 in-lb (2.8 N·m) - 35 in-lb (4 N·m).

SUBTASK 26-11-01-420-011

(3) Do these steps to install the right core fire detector assembly [22] (Figure 403):

(a) Make sure that the ends of the right core fire detector assembly [22] and brackets are clean.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) Position the right core fire detector assembly [22] on the engine.

(c) Make sure that the preload between the right core fire detector assembly [22] and attach points is not more than 10 lbf (44.48 N).

(d) Install the bolts [20] that hold the top fire detector of right core fire detector assembly [22] to the engine.

1) Tighten the bolts [20] to 78 in-lb (8.8 N·m) - 82 in-lb (9.3 N·m).

(e) Install the bolts [24] that hold the bottom fire detector of right core fire detector assembly [22] to the engine.

1) Tighten the bolts [24] to 73 in-lb (8.25 N·m) - 77 in-lb (8.70 N·m).

(f) Apply Pure Nickel Special compound, D00006, under the heads of the bolts [11].

(g) Install the bolts [11] at each applicable clamp [13] location along the support tube [10] (View I, Figure 403).

1) Make sure that the sleeves [12] are installed.

2) Tighten the bolts [11] to 73 in-lb (8.25 N·m) - 77 in-lb (8.70 N·m).

(h) Make sure that there is at least 0.12 in. (3 mm) between the elements [6] and support tube [10].

LOM ALL PRE SB 737-CFM56-7B-72-0759

(i) Install the leads [4] as follows (Views B and C, Figure 403):

NOTE: If the leads are different sizes, install the lead with the small hole on top of the large hole.

1) Install the leads [4], washer [3], and nut [23].

a) Make sure that the distance between the leads [4] is 0.380 in. (9.652 mm) - 0.500 in. (12.700 mm).

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

LOM ALL POST SB 737-CFM56-7B-72-0759 OR PRE SB 737-CFM56-7B-72-0981

(j) Install the lead [4] as follows (Views B and C, Figure 403):

1) Install the lead [4], washer [3], and nut [23].

a) Make sure that the wire bend radius is greater than 0.59 in. (15.0 mm).

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

LOM ALL POST SB 737-CFM56-7B-72-0981

(k) Install the lead [4] and lead [26] as follows (Figure 403):

1) Install the lead [4], washer [3], and nut [23] to the terminal.

a) Make sure that the wire bend radius is greater than 0.59 in. (15.0 mm).

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-462 PRE SB 737-26-1142 AND POST SB 737-CFM56-7B-72-0981

2) Install the screw [25], lead [26], clamp [27], and nut [29] to the bracket [28].

a) Tighten the nut [29] to 34 in-lb (3.8 N·m) - 36 in-lb (4.1 N·m).

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-462 POST SB 737-26-1142 AND POST SB 737-CFM56-7B-72-0981; LOM 463-999 POST SB 737-CFM56-7B-72-0981

3) Install the clamp [27] and lead [26] to the bracket [28].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

a) Make sure that the lead [26] for the is parallel with the bracket [28] (View E, Figure 403).

<1> If the ground wire loop is still large, do this step (View F, Figure 403):

<a> Rotate the lead [26] up to 30 degrees counterclockwise from its parallel position with the clamp [27] (View E, Figure 403).

NOTE: The most effective range for the lead position to minimize the ground wire loop and to prevent ground wire damage is between its parallel position with the clamp and 30 degrees counterclockwise from its parallel position.

<2> If the ground wire loop is still large, do these steps:

<a> Move the lead [26] counterclockwise in increments of 10 degrees until the ground wire loop is minimized.

<b> If you observe the tension in the ground wire, do not continue to move the lead [26].

b) Tighten the nut [29] to 34 in-lb (3.8 N·m) - 36 in-lb (4.1 N·m).

LOM ALL

SUBTASK 26-11-01-420-012

(4) Do these steps to install the left core fire detector assembly [31] (Figure 404):

(a) Make sure that the ends of the left core fire detector assembly [31] and the brackets are clean.

(b) Position the left core fire detector assembly [31] on the engine.

(c) Make sure that the preload between the left core fire detector assembly [31] and attach points is not more than 10 lbf (44.48 N).

(d) Install the bolts [24] that hold the left core fire detector assembly [31] to the engine.

1) Tighten the bolts [24] to 73 in-lb (8.25 N·m) - 77 in-lb (8.70 N·m).

(e) Apply Pure Nickel Special compound, D00006, under the heads of the bolts [11].

(f) Install the bolts [11] at each applicable clamp [13] location along the support tube [10] (View G, Figure 404).

1) Make sure that the sleeves [12] are installed.

2) Tighten the bolts [11] to 73 in-lb (8.25 N·m) - 77 in-lb (8.70 N·m).

(g) Make sure that there is at least 0.12 in. (3 mm) between the elements [6] and support tube [10].

LOM ALL PRE SB 737-CFM56-7B-72-0759

(h) Install the leads [4] as follows (Views C and D, Figure 404):

NOTE: If the leads are different sizes, install the lead with the small hole on top of the large hole.

1) Install the leads [4], washer [3], and nut [23].

a) Make sure that the distance between the leads [4] is 0.380 in. (9.652 mm) - 0.500 in. (12.700 mm).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL PRE SB 737-CFM56-7B-72-0759 (Continued)

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

LOM ALL POST SB 737-CFM56-7B-72-0759 OR PRE SB 737-CFM56-7B-72-0981

(i) Install the lead [4] as follows (Views C and D, Figure 404):

1) Install the lead [4], washer [3], and nut [23].

a) Make sure that the wire bend radius is greater than 0.59 in. (15.0 mm).

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

LOM ALL POST SB 737-CFM56-7B-72-0981

(j) Install the lead [4] and lead [26] as follows (Views C and D, Figure 404):

1) Install the lead [4], washer [3], and nut [23] to the terminal.

a) Make sure that the wire bend radius is greater than 0.59 in. (15.0 mm).

b) Tighten the nut [23] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

2) Install the screw [25], lead [26], clamp [27], and nut [29] to the bracket [28].

a) Tighten the nut [29] to 34 in-lb (3.8 N·m) - 36 in-lb (4.1 N·m).

LOM ALL

SUBTASK 26-11-01-280-002

(5) Measure the electrical bonding resistance between the mounting strap [18] or clamp [19] and airplane structure (SWPM 20-20-00).

(a) Use an intrinsically safe approved bonding meter, COM-1550.

(b) Make sure that the electrical bonding resistance is 0.010 ohm (10 milliohm) or less.

(c) If the resistance is more than 0.010 ohm (10 milliohm), clean the bonding surfaces with solvent, B00083, and do the check again.

SUBTASK 26-11-01-860-005

(6) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

G. Engine Fire Detector Element Installation Test

SUBTASK 26-11-01-710-002

(1) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE DETECTORS - INSPECTION/CHECK

1. General

A. This procedure has this task:

(1) An inspection of the wires to the forward transponder of the upper fan case engine fire overheat detector for contact with the strut insulation blanket.

TASK 26-11-01-211-801

2. Engine Fire Detector Inspection

(Figure 601)

A. References

Reference	Title
SWPM 20-10-11	WIRING ASSEMBLY AND INSTALLATION CONFIGURATION

B. Consumable Materials

Reference	Description	Specification
G50541	Tubing - Heat Shrinkable, Teflon Sleeve (TFE-R-5/8-X)	AS23053/12
G50544	Tubing - Heat Shrinkable, Teflon Sleeve (TFE-R-1/2-X)	AS23053/12

C. Engine Fire Detector Inspection

SUBTASK 26-11-01-210-001

(1) Do a visual check of the fire detectors for nicks, cracks, cuts, burrs, corrosion, breaks, scoring, deformation, dents, thread damage, or other defects.

(a) Make sure that the markings and nomenclature are complete and easy to read.

SUBTASK 26-11-01-211-001

(2) Make sure that the ceramic insulation around the terminal stud of the fire detectors is not damaged.

NOTE: Refer to the manufacturer's Component Maintenance Manual (CMM) for permitted defects.

SUBTASK 26-11-01-211-002

(3) Do a visual check of the sensor element for abrasion, kinks, cuts, or severe pits.

NOTE: Chafing damage shows a clearance problem in the airplane installation.

NOTE: If the sensor element tube has no gas leak, small dents, nicks, or pits are permitted.

NOTE: The fire detector will fail the internal resistance test if there is a gas leak

SUBTASK 26-11-01-212-001

(4) Make sure that there is no contact between the forward transponder of the upper fan case engine fire/overheat detector and strut insulation blanket (View F, Figure 601).

SUBTASK 26-11-01-300-001

(5) If there is a contact and wire insulation is damaged, repair the wire as described below and change the routing of the wire (View F, Figure 601).

(a) If no contact is found and the wires are routed, no further action is required.

SUBTASK 26-11-01-030-001

(6) Disconnect the lug from the fire/overheat transponder.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-11-01-300-002

(7) Cut a sufficient length of TFE-R 5/8-X tubing, G50541, or TFE-R-1/2-X tubing, G50544, to cover the worn area.

(a) Make sure that the sleeve long enough to exceed the length of the damage by approximately 0.4 in. (10.2 mm).

SUBTASK 26-11-01-300-003

(8) Heat the sleeve at 700°F (371°C) maximum until shrinking operation is completed.

SUBTASK 26-11-01-430-001

(9) Reconnect the lug on the fire detection transponder.

(a) For the fire detector harness, MW0316, make sure that the minimum clearance between the fire detection wires and strut insulation blanket is 0.15 in. (3.81 mm).

1) If the clearance between the fire detection wires and strut insulation is not within the limits, do the following steps:

a) Adjust the wires.

b) Secure per SWPM 20-10-11.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

UPPER FAN FIRE DETECTOR
(EXAMPLE)

A

2931812 S0000709319_V1

Engine Fire Detector
Figure 601/26-11-01-990-802 (Sheet 1 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOWER FAN FIRE DETECTOR
(EXAMPLE)

B

2931815 S0000709320_V1

Engine Fire Detector
Figure 601/26-11-01-990-802 (Sheet 2 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Engine Fire Detector
Figure 601/26-11-01-990-802 (Sheet 3 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LEFT CORE FIRE DETECTOR
(EXAMPLE)

D

2931824 S0000709322_V1

Engine Fire Detector
Figure 601/26-11-01-990-802 (Sheet 4 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

**LEFT CORE FIRE DETECTOR
(EXAMPLE)**

E

2931830 S0000709323_V1

**Engine Fire Detector
Figure 601/26-11-01-990-802 (Sheet 5 of 6)**

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

F

G

1 SEPARATE WIRES AS MUCH AS POSSIBLE. BEND DOWN AND AWAY FROM CONTACT WITH STRUT BLANKET. FOR MW0316 DETECTOR, ADJUST THE WIRES AND SECURE PER SWPM 20-10-11 TO ACHIEVE A MINIMUM CLEARANCE OF 0.15 INCH (3.81 mm) BETWEEN THE FIRE DETECTION WIRES AND THE STRUT INSULATION BLANKET.

2931837 S0000709324_V2

Engine Fire Detector
Figure 601/26-11-01-990-802 (Sheet 6 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE DETECTOR HARNESS - REMOVAL/INSTALLATION

1. General

A. The fan fire detection harnesses are MW0315 and MW0316. The core fire detection harnesses are the MW0325 and MW0326. Both of the fan harnesses connect to one loop of the two fan fire detectors. Similarly, each core harness connects to one loop of the two core detectors.

B. This procedure has these tasks:

(1) The removal of the fan fire detection harnesses (MW0315 and MW0316).

(2) The installation of the fan fire detection harnesses (MW0315 and MW0316).

(3) The removal of the core fire detection harnesses (MW0325 and MW0326 harnesses).

(4) The installation of the core fire detection harnesses (MW0325 and MW0326 harness).

TASK 26-11-02-000-801

2. Fan Fire Detection Harness Removal

(Figure 401)

A. General

(1) The removal task for harness MW0315 and MW0316 is the same.

(2) MW0315 is a component of loop A of the engine fan fire detection circuit.

(3) MW0316 is a component of loop B of the engine fan fire detection circuit.

B. References

Reference	Title
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)

C. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

D. Prepare for the Removal

SUBTASK 26-11-02-040-001

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-010-001

WARNING

DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

SUBTASK 26-11-02-010-002

(3) Get access to the harness in the 3:00 o'clock strut as follows:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) Remove the screws [110] which attach the 3:00 O'clock strut fairing [111] to the 3:00 o'clock strut.

(b) Remove the 3:00 O'clock strut fairing [111].

(c) Remove the bolts [104] which attach the upper half-firewall [103] to the lower half-firewall [109].

(d) Remove the upper half-firewall [103].

(e) Remove the bolts [108] which attach the lower half-firewall [109] to the strut.

(f) Remove the lower half-firewall [109].

(g) Remove the bolts [106] and washers [107] which attach the 3:00 O'clock strut seal [105].

(h) Remove the 3:00 O'clock strut seal [105].

E. Fan Fire Detection Harness Removal

SUBTASK 26-11-02-020-001

(1) Fan fire detection harness removal:

(a) Disconnect the harness connector (core) [118] from the core fire detection harness receptacle.

(b) Disconnect the harness connector (pylon) [119] from the pylon receptacle.

(c) Remove the nut [114] and washer [115] which attach the two terminal lugs of each harness to the fan fire detectors.

(d) For the fan fire detection harness, MW0315 [101], remove the bolt [112] and washer [113] that attach each ground lug of the harness to the engine bracket.

(e) For the fan fire detection harness, MW0316 [102], do these steps:

1) Remove the nut [121] and washer [122] from the one end of the fan fire detection harness, MW0316 [102] (View F, Figure 401).

2) Remove the bolt [123] and washer [124] from the another end of the fan fire detection harness, MW0316 [102] (View H, Figure 401).

(f) Loosen the bolt [120] and open the clamp [116] that attach each harness to the engine brackets.

(g) Disengage the harness from the omega clamps.

(h) Pull the flexible clamp with harness out of the 3:00 o'clock strut and disengage the harness.

(i) Pull the harness through the 3:00 o'clock strut.

(j) Remove the harness from the engine.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G19640 S0006568047_V5

Fan Fire Detection Harnesses Installation
Figure 401/26-11-02-990-801 (Sheet 1 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G16018 S0006568048_V5

Fan Fire Detection Harnesses Installation
Figure 401/26-11-02-990-801 (Sheet 2 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G18965 S0006568049_V3

Fan Fire Detection Harnesses Installation
Figure 401/26-11-02-990-801 (Sheet 3 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1 FOR UPPER MW0315 DETECTOR, SEPARATE WIRES AS MUCH AS POSSIBLE. BEND DOWN AND AWAY FROM CONTACT WITH STRUT BLANKET.

G19631 S0006568050_V10

Fan Fire Detection Harnesses Installation
Figure 401/26-11-02-990-801 (Sheet 4 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2 FOR UPPER MW0316 DETECTOR, ADJUST THE WIRES AND SECURE PER SWPM 20-10-11 TO ACHIEVE A MINIMUM CLEARANCE OF 0.15 INCHES (3.81 mm) BETWEEN THE FIRE DETECTION WIRES AND THE STRUT INSULATION BLANKET.

3024385 S0000796147_V1

Fan Fire Detection Harnesses Installation
Figure 401/26-11-02-990-801 (Sheet 5 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

3024378 S0000796148_V1

Fan Fire Detection Harnesses Installation
Figure 401/26-11-02-990-801 (Sheet 6 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-11-02-400-801

3. Fan Fire Detection Harness Installation

(Figure 401)

A. General

(1) The installation task for MW0315 and MW0316 is the same.

(2) MW0315 is a component of loop A of the engine fan fire detection circuit.

(3) MW0316 is a component of loop B of the engine fan fire detection circuit.

B. References

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
SWPM 20-10-11	WIRING ASSEMBLY AND INSTALLATION CONFIGURATION
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-614	Bonding Meters - Non-Intrinsically Safe (For use in outside Class I, Divisions I & II non-hazardous locations. For hazardous locations, use COM-1550). Part #: 247000 Supplier: 00426 Part #: 620LK Supplier: 1CRL2 Part #: BLR-0003-XX Supplier: KC432 Part #: BT51 Supplier: 00426 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659 Opt Part #: 247001 Supplier: 00426

D. Consumable Materials

Reference	Description	Specification
B00184	Solvent - Presealing, Cleaning Solvent	BMS11-7
D00601 [CP2101]	Vaseline - Graphite Mineral	
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)

E. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

F. Prepare for the Installation

SUBTASK 26-11-02-640-001

(1) Lubricate the threads of the bolts with graphite mineral vaseline, D00601 [CP2101], before their installation.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-11-02-210-001

(2) Make sure that the connectors and receptacles are clean and clear of unwanted materials.

SUBTASK 26-11-02-210-002

(3) During the installation, make sure that the harnesses are not stressed or torn.

G. Fan Fire Detection Harness Installation

SUBTASK 26-11-02-420-001

(1) Install the fan fire detection harness:

(a) Put the harness in position on the fan frame.

(b) Install the harness through the 3:00 o'clock strut to the inside of the engine.

(c) Distribute the slack all along the attachment points on the fan frame and in the 3:00 o'clock strut.

(d) Connect the harness connector to the core fire detection harness receptacle.

1) Tighten by hand.

(e) Connect the harness connector to the pylon receptacle.

1) Tighten by hand.

(f) For the fire detector harness, MW0315, do these steps:

1) Separate the wires as much as possible.

2) Bend the wires down and away from contact with the strut blanket.

(g) For the fire detector harness, MW0316, do these steps:

1) Achieve the minimum clearance of 0.15 in. (3.81 mm) between the fire detection wires and strut insulation blanket, do the following steps:

a) Adjust the wires.

b) Secure the wires (SWPM 20-10-11).

2) Make sure that the minimum clearance between the fire detection wires and strut insulation blanket is 0.15 in. (3.81 mm).

CAUTION MAKE SURE THAT YOU HAVE THE HARNESS IN THE CORRECT POSITION IN THE FIREWALL OPEN HOLES. IF YOU DO NOT INSTALL HARNESS CORRECTLY, DAMAGE TO EQUIPMENT CAN OCCUR.

(h) Attach the terminal lugs of the harness to each fan fire detector with the washer [115] that should be installed under the nut [114].

NOTE: If the leads are different sizes, install the lead with the small hole on top of the lead with the large hole.

1) Tighten the nut [114] to 25.00 in-lb (2.82 N·m) - 35.00 in-lb (3.95 N·m).

(i) For the fan fire detection harness, MW0315 [101], attach the ground lug of the harness to each engine bracket with the washer [113] and bolt [112].

1) Tighten the bolts [112] to 97 in-lb (11 N·m) - 103 in-lb (11.6 N·m).

(j) For the fan fire detection harness, MW0316 [102], do these steps:

1) For the one end of the fan fire detection harness, MW0316 [102], attach the ground lug of the harness to engine bracket with the washer [122] and nut [121] as follows (View F, Figure 401):

ECCN 9E991 BOEING PROPRIETARY - See title page for details

a) Use cotton wiper, G00034, moist in solvent, B00184, to clean the contact surface of the engine bracket and ground lug.

b) Attach the ground lug of the harness to engine bracket with the washer [122] and nut [121].

c) Tighten the nut [121] to 90 in-lb (10 N·m) - 105 in-lb (11.9 N·m).

d) Measure the electrical resistance between the ground lug and airplane structure (SWPM 20-20-00).

<1> Use a non-intrinsically safe bonding meter, COM-614.

<2> Make sure that the electrical bonding resistance is 0.001 ohm (1.0 milliohm) or less.

2) For the another end of the fan fire detection harness, MW0316 [102], attach the ground lug of the harness to the engine bracket with the bolt [123] and washer [124] as follows (View H, Figure 401):

a) Use cotton wiper, G00034, moist in solvent, B00184, to clean the contact surface of the engine bracket, ground lug, and washer [124].

b) Attach the ground lug of the harness to the engine bracket with the bolt [123] and washer [124].

c) Tighten the bolt [123] to 78 in-lb (9 N·m) - 82 in-lb (9.3 N·m).

d) Measure the electrical resistance between the ground lug and airplane structure (SWPM 20-20-00).

<1> Use a non-intrinsically safe bonding meter, COM-614.

<2> Make sure that the electrical bonding resistance is 0.001 ohm (1.0 milliohm) or less.

(k) Attach the harness to each engine bracket with the clamp [116] and tighten the bolt [120].

(l) Install the harness in the flexible clamp at the 3:00 o'clock strut location.

(m) Engage the harness in the omega clamps.

SUBTASK 26-11-02-410-001

(2) Close the access to the 3:00 o'clock position strut as follows:

(a) Install the 3:00 O'clock strut seal [105], washers [107], and bolts [106].

1) Tighten the bolts [106] to 110.0 in-lb (12.4 N·m) - 120.0 in-lb (13.6 N·m).

(b) Install the lower half-firewall [109] and attach it to the strut with the bolts [108].

1) Tighten the bolts [108] to 109.25 in-lb (12.34 N·m) - 120.75 in-lb (13.64 N·m).

(c) Install the upper half-firewall [103] and attach it to the lower half fire wall with the bolts [104].

1) Tighten the bolts [104] to 109.25 in-lb (12.34 N·m) - 120.75 in-lb (13.64 N·m).

(d) Install the 3:00 O'clock strut fairing [111] and attach it with the screws [110] to the 3:00 o'clock strut.

1) Tighten the screws [110] to 30 in-lb (3.4 N·m) - 35 in-lb (4.0 N·m).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

H. Fan Fire Detection Harness Installation Test

SUBTASK 26-11-02-440-001

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-710-001

(2) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

I. Put the Airplane Back to Its Usual Condition

SUBTASK 26-11-02-010-003

WARNING OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

END OF TASK

TASK 26-11-02-000-802

4. Core Fire Detection Harnesses - Removal

(Figure 402, Figure 403, Figure 404, Figure 405, Figure 406, Figure 407)

A. General

(1) The core fire detection harness, MW0325 [33] is a component of loop A of the engine core fire detection circuit.

(2) The core fire detection harness, MW0326 [31] is a component of loop B of the engine core fire detection circuit.

B. References

Reference	Title
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)

C. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

D. Prepare for the Removal

SUBTASK 26-11-02-040-009

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-010-010

(2) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

E. Core Fire Detection Harness Removal

SUBTASK 26-11-02-020-011

(1) Core fire detection harness removal:

(a) Disconnect the fan fire detection harness connector, DP1601, and harness connector, DP1501, from the core fire detection harness receptacle, DJ2601, and harness receptacle, DJ2501.

(b) Remove the bolts [35] that attach each harness receptacle, DJ2601, and harness receptacle, DJ2501, to the engine bracket.

(c) Remove the washer [15] and nut [14] that attach the terminal lugs [20] to each core fire detector.

LOM ALL PRE SB 737-CFM56-7B-72-0258 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981 AND PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759

(d) Remove the washer [18] and bolt [17] that attach the ground lug [19] to the engine bracket (Figure 402 (Sheet 4)).

LOM ALL PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

(e) Loosen the quarter-turn bolt and release the clamp [16] that attach each harness to the engine bracket.

(f) Loosen the quarter-turn bolt and release the clamps [32] that attach the harness to the engine brackets.

(g) Remove the bolts [36] that attach the harness to the bracket (Figure 402 (Sheet 3) view D).

(h) Remove the harness from the engine.

LOM ALL POST SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

F. Core Fire Detection Harness Removal

SUBTASK 26-11-02-020-012

(1) Core fire detection harness removal:

(a) Remove the bolt [2] and self-locking nut [3] that attach the loop clamp [4] to the L bracket [5] at two locations.

(b) Disconnect the connector, DP1501, and connector, DP1601, from the core fire detection harness connectors at the cable mounting bracket [1].

(c) Disconnect the core fire detection harness, MW0325 [33] and core fire detection harness, MW0326 [31] at each fire detector.

1) Remove the terminal nut [6] from the detector bracket [7].

2) Remove the screw [8] and nut [9] from the detector bracket [7].

3) Remove the ground strap [11] from the fire detector cable assembly.

(d) Disconnect the bolts [2] and self-locking nuts [3] on the loop clamps [4] at all other places along the length of the harness.

(e) Remove the loop clamps [4], cable bushings [10], and teflon inserts [12] along the length of the harness.

(f) Remove the harness from the engine.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010

G. Core Fire Detection Harness Removal

SUBTASK 26-11-02-020-013

(1) Disconnect the fan fire detection harness, MW0315 [99] and fan fire detection harness, MW0316 [100] from the core fire detection harness receptacles.

SUBTASK 26-11-02-020-015

(2) Remove the core fire detection harness, MW0325 [33]:

(a) Cut the safety wire or cable, that safeties the bolts [64].

(b) Remove the bolt [72] and washer [56] that attach the ground strap [59] to the bracket.

(c) Remove the nut [57] and washer [58] that attach the terminal lug [45] to the fire detector (Figure 404 (Sheet 13) or Figure 404 (Sheet 14) view E).

(d) Remove the bolt [64] that attaches the clamp [62] to the engine (Figure 404 (Sheet 13) or Figure 404 (Sheet 14) view E).

(e) Remove the bolt [70] and washer [38] that attach the ground strap [60] to the engine.

(f) Remove the nut [53] and washer [71] that attach the terminal lug [44] to the fire detector (Figure 404 (Sheet 11) or Figure 404 (Sheet 12) view F).

(g) Remove the bolt [36] that attaches the clamp [39] to the bracket (Figure 404 (Sheet 11) or Figure 404 (Sheet 12) view F).

(h) Remove the bolts [64] that attach the harness to the bracket (Figure 404 (Sheet 15) view J).

(i) Remove the bolt [64] and nut [40] that attach the clamp [39] to the engine (Figure 404 (Sheet 15) view H).

(j) Remove the bolt [51] that attaches the clamp [42] to the bracket (Figure 404 (Sheet 11) or Figure 404 (Sheet 12) view G).

(k) Remove the clamps [39], clamp [42], and clamp [62] along the length of the harness.

LOM ALL POST SB 737-CFM56-7B-72-0759

(l) Remove and discard the teflon inserts [21] and teflon inserts [22] from the clamps [39] and clamps [42].

NOTE: Teflon liners should not be reused. Opening up the Teflon liners causes them to expand.

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010

(m) Remove the core fire detection harness, MW0325 [33] from the engine.

SUBTASK 26-11-02-020-016

(3) Remove the core fire detection harness, MW0326 [31]:

(a) Cut the safety wire or cable, that safeties the bolts [64].

(b) Remove the bolt [48] and washer [49] that attach the ground strap [54] to the bracket.

(c) Remove the nut [69] and washer [50] that attach the terminal lug [52] to the fire detector (Figure 404 (Sheet 3) or Figure 404 (Sheet 4) view P).

(d) Remove the bolt [64] that attaches the clamp [61] to the bracket (Figure 404 (Sheet 3) or Figure 404 (Sheet 4) view P).

(e) Remove the bolt [67] and washer [38] that attach the ground strap [55] to the engine.

(f) Remove the nut [68] and washer [46] that attach the terminal lug [66] to the fire detector (Figure 404 (Sheet 5) or Figure 404 (Sheet 6) view V).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010 (Continued)

(g) Remove the bolt [47] that attaches the clamp [39] to the bracket (Figure 404 (Sheet 5) or Figure 404 (Sheet 6) view V).

(h) Remove the bolts [64] that attach the core fire detection harness, MW0326 [31] to the bracket (Figure 404 (Sheet 9) or Figure 404 (Sheet 10) view W).

(i) Remove the bolt [64] that attaches the clamp [39] to the engine (Figure 404 (Sheet 7) or Figure 404 (Sheet 8) view K).

(j) Remove the bolt [64] that attaches the clamp [39] to the bracket (Figure 404 (Sheet 3) or Figure 404 (Sheet 4) view L).

(k) Remove the bolt [64] that attaches the clamp [39] to the engine (Figure 404 (Sheet 7) or Figure 404 (Sheet 8) view M).

(l) Remove the bolt [64] that attaches the clamp [39] to the engine (Figure 404 (Sheet 7) or Figure 404 (Sheet 8) view Q).

(m) Remove the bolt [64] that attaches the clamp [39] to the engine (Figure 404 (Sheet 7) or Figure 404 (Sheet 8) view N).

(n) Remove the bolt [64] that attaches the clamp [39] to the engine (Figure 404 (Sheet 7) or Figure 404 (Sheet 8) view R).

(o) Remove the bolt [64] that attaches the clamp [39] to the engine (Figure 404 (Sheet 9) or Figure 404 (Sheet 10) view S).

(p) Remove the bolt [64] that attaches the clamp [39] to the engine (Figure 404 (Sheet 9) or Figure 404 (Sheet 10) view T).

(q) Remove the bolt [64] that attaches the clamp [39] to the engine (Figure 404 (Sheet 9) or Figure 404 (Sheet 10) view U).

(r) Remove the clamps [39] and clamp [61].

LOM ALL POST SB 737-CFM56-7B-72-0759

(s) Remove and discard the teflon inserts [21] and teflon inserts [22] from the clamps [39] and clamp [61].

NOTE: Teflon liners should not be reused. Opening up the Teflon liners causes them to expand.

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010

(t) Remove the core fire detection harness, MW0326 [31] from the engine.

LOM ALL POST SB 737-CFM56-7B-72-0981

H. Core Fire Detection Harness Removal

SUBTASK 26-11-02-020-017

(1) Remove the core fire detection harness, MW0325 [33]:

(a) Disconnect the harness connector, MW0315, from the harness receptacle, MW0325.

(b) Cut the safety wire or cable, that safeties the bolts [2] (Figure 407 (Sheet 12) view X).

(c) Remove the bolts [2] that attach the MW0325 harness receptacle to the bracket (Figure 407 (Sheet 12) view J).

(d) Remove the nut [91] and washer [90] that attach the terminal lug [66] to the fire detection unit (Figure 407 (Sheet 8) view F).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0981 (Continued)

(e) Remove the nut [88] and screw [72] that attach the clamp [39] and ground lug [64] to the bracket (Figure 407 (Sheet 8) view F).

(f) Remove the nut [93] and washer [92] that attach the terminal lug [67] to the fire detection unit (Figure 407 (Sheet 9) view E).

(g) Remove the nut [89] and screw [73] that attach the clamp [19] and ground lug [65] to the bracket (Figure 407 (Sheet 9) view E).

(h) Remove the bolt [13] and nut [94] that attach the clamp [38] to the core engine (Figure 407 (Sheet 12) view H).

(i) Remove the bolt [12] that attaches the clamp [37] to the bracket (Figure 407 (Sheet 8) view G).

(j) Remove the bolt [11] that attaches the clamp [36] to the bracket (Figure 407 (Sheet 9) view E).

(k) Remove the bolt [10] that attaches the clamp [35] to the bracket (Figure 407 (Sheet 8) view F).

(l) Remove the bolt [9] and nut [87] that attach the clamp [34] to the bracket (Figure 407 (Sheet 12) view H and view V).

(m) Remove the clamp [19], clamp [34], clamp [35], clamp [36], clamp [37], clamp [38], and clamp [39].

(n) Remove the bushings [97] and bushings [98].

(o) Remove the core fire detection harness, MW0325 [33] from the engine.

SUBTASK 26-11-02-020-018

(2) Remove the core fire detection harness, MW0326 [31]:

(a) Disconnect the harness connector, MW0316, from the harness receptacle, MW0326.

(b) Cut the safety wire or cable, that safeties the bolts [1] (Figure 407 (Sheet 12)).

(c) Remove the bolts [1] that attach the MW0326 harness receptacle to the bracket (Figure 407 (Sheet 6)).

(d) Remove the nut [84] and washer [83] that attach the terminal lug [62] to the fire detection unit (Figure 407 (Sheet 3) view P).

(e) Remove the nut [81] and screw [70] that attach the clamp [32] and ground lug [60] to the bracket (Figure 407 (Sheet 3) view P).

(f) Remove the nut [86] and washer [85] that attach the terminal lug [63] to the fire detection unit (Figure 407 (Sheet 4)).

(g) Remove the nut [82] and screw [71] that attach the clamp [33] and ground lug [61] to the bracket (Figure 407 (Sheet 4)).

(h) Remove the bolt [8] that attach the clamp [25], clamp [26], clamp [27], clamp [28], clamp [29], clamp [30], and clamp [31] to the brackets on the engine (Figure 407 (Sheet 5)).

(i) Remove the bolt [7] that attaches the clamp [24] to the bracket (Figure 407 (Sheet 3) view L).

(j) Remove the bolt [6] that attaches the clamp [23] to the bracket (Figure 407 (Sheet 4)).

(k) Remove the bolt [5] that attaches the clamp [22] to the bracket (Figure 407 (Sheet 3) view P).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0981 (Continued)

(l) Remove the bolt [4] that attaches the clamp [21] to the core engine (Figure 407 (Sheet 6) view K).

(m) Remove the bolt [3] and nut [80] that attach the clamp [20] to the bracket (Figure 407 (Sheet 6) view Y).

(n) Remove the clamp [20], clamp [21], clamp [22], clamp [23], clamp [24], clamp [25], clamp [26], clamp [27], clamp [28], clamp [29], clamp [30], clamp [31], clamp [32], and clamp [33].

(o) Remove the bushings [97] and bushings [98].

(p) Remove the core fire detection harness, MW0326 [31] from the engine.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G19272 S0006568053_V3

Core Fire Detection Harnesses Installation
Figure 402/26-11-02-990-837 (Sheet 1 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G19037 S0006568054_V2

Core Fire Detection Harnesses Installation
Figure 402/26-11-02-990-837 (Sheet 2 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

C

(EXAMPLE)

D

G21635 S0006568055_V4

Core Fire Detection Harnesses Installation
Figure 402/26-11-02-990-837 (Sheet 3 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

E

1973360 S0000379215_V3

Core Fire Detection Harnesses Installation
Figure 402/26-11-02-990-837 (Sheet 4 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

E

1973347 S0000379216_V3

Core Fire Detection Harnesses Installation
Figure 402/26-11-02-990-837 (Sheet 5 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

E

2030684 S0000406315_V2

Core Fire Detection Harnesses Installation
Figure 402/26-11-02-990-837 (Sheet 6 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1531887 S0000279291_V5

Core Fire Detection Harnesses Installation
Figure 403/26-11-02-990-832 (Sheet 1 of 5)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1532095 S0000279292_V2

Core Fire Detection Harnesses Installation
Figure 403/26-11-02-990-832 (Sheet 2 of 5)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Core Fire Detection Harnesses Installation
Figure 403/26-11-02-990-832 (Sheet 3 of 5)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TWO CABLE CLAMP WITH L BRACKET SUPPORT

G

1539510 S0000279294_V4

Core Fire Detection Harnesses Installation
Figure 403/26-11-02-990-832 (Sheet 4 of 5)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FIRE DETECTOR (EXAMPLE)

H

FIRE DETECTOR (EXAMPLE)

I

3 O'CLOCK CORE FIRE DETECTOR

J

2792706 S0000635606_V1

Core Fire Detection Harnesses Installation
Figure 403/26-11-02-990-832 (Sheet 5 of 5)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2086830 S0000439258_V3

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 1 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2086853 S0000439260_V3

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 2 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2086657 S0000439262_V6

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 3 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2796215 S0000638053_V2

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 4 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2086666 S0000439264_V6

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 5 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

V

2796216 S0000638054_V2

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 6 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2086680 S0000439265_V3

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 7 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2796217 S0000638055_V1

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 8 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2086704 S0000439266_V5

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 9 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2796218 S0000638056_V2

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 10 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1 POST CFM-SB 72-0824
2 PRE CFM-SB 72-0824

2086732 S0000439267_V8

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 11 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G

F

1 POST CFM-SB 72-0824
2 PRE CFM-SB 72-0824

2796219 S0000638058_V2

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 12 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

E

2086738 S0000439268_V6

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 13 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

E

2796220 S0000638059_V2

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 14 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2086800 S0000439270_V8

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 15 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

X

2086803 S0000439271_V4

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 16 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

EXAMPLE OF ACCEPTABLE ATTACHMENT METHOD

2105556 S0000449161_V3

Core Fire Detection Harnesses Installation
Figure 404/26-11-02-990-833 (Sheet 17 of 17)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FIRE DETECTOR HARNESS BRACKET BOLT

A

2103855 S0000447824_V3

Clearance between Fire Detector Harness Bracket Bolt and Fuel Supply Manifold
Figure 405/26-11-02-990-834 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FIRE DETECTOR HARNESS BRACKET BOLT

A

2184651 S0000483624_V3

Clearance between Fire Detector Harness Bracket Bolt and Fuel Supply Manifold
Figure 405/26-11-02-990-834 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

HPT CC AIR DUCT BRACKET AND FIRE DETECTOR BRACKET

A

2103814 S0000447827_V2

HPT CC Air Duct Bracket and Fire Detector Bracket
Figure 406/26-11-02-990-835

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 1 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2796222 S0000638136_V2

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 2 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2796224 S0000638137_V2

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 3 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

V

2796225 S0000638138_V2

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 4 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2796226 S0000638139_V2

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 5 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2796227 S0000638141_V2

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 6 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2796228 S0000638142_V2

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 7 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2796229 S0000638143_V2

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 8 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

E

2796230 S0000638144_V2

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 9 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

3014410 S0000788014_V1

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 10 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1 LEAD IS PARALLEL WITH THE CLAMP ±5˚.

2 LEAD IS ROTATED 30 DEGREES COUNTERCLOCKWISE FROM ITS PARALLEL POSITION WITH THE CLAMP.

3014406 S0000788001_V1

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 11 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2796231 S0000638145_V2

Core Fire Detection Harnesses Installation
Figure 407/26-11-02-990-836 (Sheet 12 of 12)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-11-02-400-802

5. **Core Fire Detection Harness - Installation**

(Figure 402, Figure 403, Figure 404, Figure 405, Figure 406, Figure 407)

A. **General**

(1) The core fire detection harness, MW0325 [33] is a component of loop A of the engine core fire detection circuit.

(2) The core fire detection harness, MW0326 [31] is a component of loop B of the engine core fire detection circuit.

B. **References**

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
70-20-01-800-804-F00	Lockwire Installation (P/B 201)
73-11-05-700-801-F00	Fuel Manifold - Inspection/Check (P/B 601)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

C. **Consumable Materials**

Reference	Description	Specification
B01058 [CP1039]	Solvent - Acetone, Reagent Grade	
D00601 [CP2101]	Vaseline - Graphite Mineral	
D00625 [CP2338]	Grease - Conductive - Brisal-OX 50-855	
G02345 [CP8001]	Wire - Safety, 0.032 Inch (0.8 mm) Diameter	AMS 5687
G50065 [CP8006]	Cable, Safety, Stainless Steel, 0.032 inch (0.8 mm) Diameter	M50 TF 9 CL-A

D. **Expendables/Parts**

AMM Item	Description	AIPC Reference	AIPC Effectivity
21	Teflon insert	26-11-02-01A-260	LOM 427-434, 437-447, 450-999
		26-11-02-01A-400	LOM 427-434, 437-447, 450-999
		26-11-02-01C-260	LOM 411, 412, 415, 416, 420, 422-426, 445
		26-11-02-01C-400	LOM 411, 412, 415, 416, 420, 422-426, 445
22	Teflon insert	26-11-02-01A-205	LOM 427-434, 437-447, 450-999
		26-11-02-01A-395	LOM 427-434, 437-447, 450-999
		26-11-02-01C-205	LOM 411, 412, 415, 416, 420, 422-426, 445
		26-11-02-01C-395	LOM 411, 412, 415, 416, 420, 422-426, 445
31	Core fire detection harness, MW0326	26-11-02-01A-410	LOM 427-434, 437-447, 450-999
		26-11-02-01A-412	LOM 427-434, 437-447, 450-999

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

AMM Item	Description	AIPC Reference	AIPC Effectivity
31 (cont.)		26-11-02-01A-413	LOM 427-434, 437-447, 450-999
		26-11-02-01B-420	LOM 402, 404, 406, 407, 411, 416, 445
		26-11-02-01B-565	LOM 402, 404, 406, 407, 411, 416, 445
		26-11-02-01B-570	LOM 402, 404, 406, 407, 411, 416, 445
		26-11-02-01C-410	LOM 411, 412, 415, 416, 420, 422-426, 445
		26-11-02-01C-412	LOM 411, 412, 415, 416, 420, 422-426, 445
		26-11-02-01C-413	LOM 411, 412, 415, 416, 420, 422-426, 445
33	Core fire detection harness, MW0325	26-11-02-01A-265	LOM 427-434, 437-447, 450-999
		26-11-02-01A-267	LOM 427-434, 437-447, 450-999
		26-11-02-01A-268	LOM 427-434, 437-447, 450-999
		26-11-02-01B-250	LOM 402, 404, 406, 407, 411, 445
		26-11-02-01B-555	LOM 402, 404, 406, 407, 411, 416, 445
		26-11-02-01B-560	LOM 402, 404, 406, 407, 411, 416, 445
		26-11-02-01C-265	LOM 411, 412, 415, 416, 420, 422-426, 445
		26-11-02-01C-267	LOM 411, 412, 415, 416, 420, 422-426, 445
		26-11-02-01C-268	LOM 411, 412, 415, 416, 420, 422-426, 445

E. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

F. Prepare for the Installation

SUBTASK 26-11-02-640-002

(1) Lubricate the threads of the bolts with graphite mineral vaseline, D00601 [CP2101], before their installation.

SUBTASK 26-11-02-210-003

(2) Make sure that the connectors and receptacles are clean and clear of unwanted materials.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-11-02-210-004

(3) During installation, make sure that the harnesses are not stressed or torn.

LOM ALL PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

G. Core Fire Detection Harness Installation

SUBTASK 26-11-02-420-002

(1) The core fire detection harness, MW0326 [31] and core fire detection harness, MW0325 [33] installation.

(a) Put the core fire detection harness, MW0326 [31] and core fire detection harness, MW0325 [33] in position on the engine.

(b) Attach the harness receptacle, DJ2601, and harness receptacle, DJ2501, to the engine bracket with the bolts [35] on each receptacle.

1) Tighten the bolts [35] to 73 in-lb (8.2 N·m) - 77 in-lb (8.7 N·m).

(c) Connect the fan fire detection harness connector, DP1601, and harness connector, DP1501, to the harness receptacle, DJ2601, and harness receptacle DJ2501.

1) Tighten by hand.

CAUTION DO NOT BEND OR APPLY SIDE LOADS TO THE WIRE LUGS. DAMAGED WIRE LUGS CAUSE LOOP DETECTOR FAULTS. IF YOU BEND THE WIRE LUGS, DAMAGE TO THEM OCCURS.

(d) Attach the terminal lugs [20] to each core fire detector with the washer [15] and nut [14].

1) If the leads are different sizes, install the lead with the small hole on top of the lead with the large hole.

2) Tighten the nuts [14] to 25 in-lb (2.82 N·m) - 35 in-lb (3.95 N·m).

LOM ALL PRE SB 737-CFM56-7B-72-0258 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981 AND PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759

(e) Attach the ground lug [19] to the bracket with the washer [18] and bolt [17].

LOM ALL PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

(f) Install the core fire detection harness, MW0326 [31] and core fire detection harness, MW0325 [33] in the clamp [16].

1) Tighten the bolt [36].

(g) Attach the core fire detection harness, MW0326 [31] and core fire detection harness, MW0325 [33] to the bracket with the bolts [36].

1) Tighten the bolts [36] to 73 in-lb (8.2 N·m) - 77 in-lb (8.7 N·m).

(h) Install the harness in the clamps [32] along the length of the harness.

1) Tighten the bolts [36].

LOM ALL POST SB 737-CFM56-7B-72-0258 AND PRE SB 737-CFM56-7B-72-0822 AND PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

(i) Make sure that there is a minimum clearance of 0.125 in. (3.18 mm) between the bolt [36] and fuel nozzle supply tube located right below this area (Figure 405).

1) If the clearance is less than 0.125 in. (3.18 mm), continue to the following step.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0258 AND POST SB 737-CFM56-7B-72-0822 AND PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

(j) Make sure that there is a minimum clearance of 0.182 in. (4.62 mm) between the bolt [36] and fuel nozzle supply tube located right below this area (Figure 405).

1) If the clearance is less than 0.182 in. (4.62 mm), continue to the following step.

LOM ALL PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

SUBTASK 26-11-02-420-006

LOM ALL POST SB 737-CFM56-7B-72-0258 AND PRE SB 737-CFM56-7B-72-0822 AND PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

(2) If the clearance between the bolt [36] and fuel nozzle tube is less than 0.125 in. (3.18 mm), do the steps that follow (Figure 406).

LOM ALL POST SB 737-CFM56-7B-72-0258 AND POST SB 737-CFM56-7B-72-0822 AND PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

If the clearance between the bolt [36] and fuel nozzle tube is less than 0.182 in. (4.62 mm), do the steps that follow (Figure 406).

LOM ALL PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

(a) Do an inspection of the fuel tube to make sure that there is no contact or damage.

1) If you see damage, do this task: Fuel Manifold - Inspection/Check, TASK 73-11-05-700-801-F00.

(b) Loosen the bolts [73] that attach the extension bracket [74] to HPT CC air duct bracket [79].

(c) Remove the bolts [75] and clamp [76] from the HPT CC air duct bracket [79].

(d) Remove the bolts [77] that attach the fire detection harness [78] to the HPT CC air duct bracket [79].

(e) To move the HPT CC air duct bracket [79], turn and pull out at the top and push in at the bottom.

(f) After the bracket [79] adjustment, do the steps:

1) Tighten the bolts [73] that attach the extension bracket [74] to the HPT CC air duct bracket [79] to 62 in-lb (7.0 N·m) - 68 in-lb (7.7 N·m).

2) Install the bolts [75] and clamp [76] to the HPT CC air duct.

a) Tighten the bolts [75] to 62 in-lb (7.0 N·m) - 68 in-lb (7.7 N·m).

3) Lubricate the threads of the bolts [77] that attach the fire detection harness [78] to the HPT CC air duct bracket [79] with graphite mineral vaseline, D00601 [CP2101].

4) Install the fire detection harness [78] and bolts [77].

a) Tighten the bolts [77] to 73 in-lb (8.2 N·m) - 77 in-lb (8.7 N·m).

5) Make sure that the fire detection harness [78] is not stressed.

LOM ALL POST SB 737-CFM56-7B-72-0258 AND PRE SB 737-CFM56-7B-72-0822 AND PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

6) Make sure that the clearance is equal to or greater than 0.125 in. (3.18 mm).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0258 AND POST SB 737-CFM56-7B-72-0822 AND PRE SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

7) Make sure that the clearance is equal to or greater than 0.182 in. (4.62 mm).

LOM ALL POST SB 737-26-1123 AND PRE SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010 AND PRE SB 737-CFM56-7B-72-0981

H. Core Fire Detection Harness Installation

SUBTASK 26-11-02-420-003

(1) Install the core fire detection harness, MW0326 [31] and core fire detection harness, MW0325 [33]:

(a) Put the core fire detection harness, MW0326 [31] and core fire detection harness, MW0325 [33] in the position on engine.

(b) Install the loop clamp [4] and teflon insert [12] on the fire detection harness at the L bracket [5] at two locations (Views C and G, Figure 403).

1) Tighten the bolt [2] on the L bracket [5] to 98 in-lb (11.1 N·m) - 110 in-lb (12.4 N·m).

(c) Connect the fan harness connectors to the core detector harness connectors.

1) Tighten by hand.

(d) Connect the core fire detection harness to each fire detector:

CAUTION DO NOT BEND OR APPLY SIDE LOADS TO THE WIRE LUGS. DAMAGED WIRE LUGS CAUSE LOOP DETECTOR FAULTS. IF YOU BEND THE WIRE LUGS, DAMAGE TO THEM OCCURS.

1) Install the loop clamp [4] and cable bushing [10] on the core fire detection harness cable.

2) Install the terminal lug [117] on the fire detector with the terminal nut [6].

a) Tighten the terminal nut [6] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

3) Install the ground strap [11] on the core fire detection cable.

4) Install the ground strap [11] and loop clamp [4] on the detector bracket [7] with the screw [8] and nut [9].

a) Tighten the screw [8] and nut [9] to 25 in-lb (2.8 N·m) - 30 in-lb (3.4 N·m).

(e) Install the teflon inserts [12], cable bushings [10], and loop clamps [4] along the length of the harness.

1) Tighten the self-locking nuts [3] to 98 in-lb (11.1 N·m) - 110 in-lb (12.4 N·m).

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010

I. Core Fire Detection Harness Installation

SUBTASK 26-11-02-640-003

(1) Lubricate the threads of bolts with graphite mineral vaseline, D00601 [CP2101], before their installation.

SUBTASK 26-11-02-420-004

(2) Install the core fire detection harness, MW0326 [31]:

(a) Put the harness in position on the core engine (Views A and B, Figure 404).

(b) Install the bolts [64] to attach MW0326 harness receptacle to the bracket (View W, Figure 404).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010 (Continued)

(c) Tighten the bolts [64] to 73 in-lb (8.2 N·m) - 77 in-lb (8.7 N·m).

(d) If the core fire detection harness, MW0325 [33], stays installed, safety the bolts [64] with safety wire, G02345 [CP8001], or cable, G50065 [CP8006] (TASK 70-20-01-800-804-F00) (View X, Figure 404).

(e) Connect the fan fire detection harness, MW0316, to the core fire detection harness, MW0326 [31].

1) Tighten by hand.

WARNING

METHYL ISOBUTYL KETONE (MIK) AND ACETONE ARE TOXIC, FLAMMABLE, AND CAN BE EXPLOSIVE. DO NOT BREATHE VAPORS. USE IN A WELL-VENTILATED AREA THAT IS FREE OF SPARKS, FLAMES, AND HOT SURFACES. WEAR GOGGLES, SOLVENT-RESISTANT GLOVES, AND OTHER PROTECTIVE CLOTHING. IF SOLVENT COMES IN CONTACT WITH YOUR EYE(S), FLUSH YOUR EYE(S) WITH WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION. IF SOLVENT COMES IN CONTACT WITH YOUR SKIN, WASH WITH SOAP AND WATER.

(f) Clean the following mating faces with acetone solvent, B01058 [CP1039] (View P, Figure 404):

1) The nut [69], washer [50], and terminal lug [52].

2) The bolt [48], washer [49], bracket, and lug of ground strap [54].

(g) Clean the following mating faces with acetone solvent, B01058 [CP1039] (View V, Figure 404):

1) The nut [68], washer [46], and terminal lug [66].

2) The bolt [67], washer [38], bracket, and lug of ground strap [55].

(h) Lightly coat previously cleaned mating faces with electrical conductive Brisal-OX 50-855 grease, D00625 [CP2338], or graphite mineral vaseline, D00601 [CP2101].

CAUTION

MAKE SURE THAT YOU INSTALL THE GROUND LUG ON THE ENGINE CORRECTLY. INCORRECT INSTALLATION OF THE GROUND LUG CAN CAUSE DAMAGE TO THE GROUND STRAP.

CAUTION

DO NOT BEND OR APPLY SIDE LOADS TO THE WIRE LUGS OR WHITE CERAMIC PART OF THE LUGS. DAMAGED WIRE LUGS CAUSE LOOP DETECTOR FAULTS. IF YOU BEND THE WIRE LUGS OR APPLY SIDE LOADS TO THE WHITE CERAMIC PIECES, DAMAGE TO THEM OCCURS.

(i) Install the nut [69] and washer [50] to attach the terminal lug [52] of the core fire detection harness, MW0326 [31] (View P, Figure 404).

NOTE: The ground strap should not be too tight or too loose (at a radius of less than 0.49 in. (12.45 mm)).

(j) Install the bolt [48] and washer [49] to attach the ground strap [54] to the bracket.

(k) Install the bolt [64] to attach the clamp [61] to the core engine bracket.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0759

1) Install the new teflon insert [21] on the clamp [61].

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010

(l) Install the bolt [64] to attach the clamp [39] to the core engine bracket (View L, Figure 404).

1) Make sure that the correct bolt hole is used.

LOM ALL POST SB 737-CFM56-7B-72-0759

2) Install the new teflon insert [22] on the clamp [39].

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010

(m) Install the nut [68] and washer [46] to attach the terminal lug [66] of the harness to the fire detector (View V, Figure 404).

(n) Install the bolt [67] and washer [38] to attach the ground strap [55] to the core engine.

(o) Install the bolt [47] to attach the clamp [39] to the core engine bracket.

LOM ALL POST SB 737-CFM56-7B-72-0759

1) Install the new teflon insert [21] on the clamp [39].

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010

(p) Tighten all the bolts to 73 in-lb (8.2 N·m) - 77 in-lb (8.7 N·m).

(q) Tighten all the nuts to 25 in-lb (2.82 N·m) - 35 in-lb (3.95 N·m).

(r) Install all the other bolts [64] to attach the clamps [39] to the brackets on the core engine (Views N, Q, R, S, T, and U, Figure 404).

LOM ALL POST SB 737-CFM56-7B-72-0759

1) Install the new teflon inserts [21] on the clamps [39].

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010

(s) Install all the other bolts [64] to attach the clamps [39] to the brackets on the core engine (Views K and M, Figure 404).

LOM ALL POST SB 737-CFM56-7B-72-0759

1) Install the new teflon inserts [22] on the clamps [39].

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010

(t) Make sure that the core fire detection harness, MW0326 [31], is not stressed.

(u) Make sure that the minimum clearance between harness branch and fuel manifold is 0.1 in. (2.54 mm).

(v) Tighten all the bolts to 73 in-lb (8.2 N·m) - 77 in-lb (8.7 N·m).

LOM ALL POST SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010

(w) Fasten the ground strap [54] and ground strap [55] to the core fire detection harness, MW0326 [31] with the splice [80] (Views P and V, Figure 404).

NOTE: The installation of splice is only applicable for SB 737–CFM56–7B-72–0759.

1) Maximum distance between two bundles is 2 in. (51 mm).

2) Attach correctly the ground strap (Sheet 17, Figure 404).

a) Make sure that the ground strap does not cross the harness.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010

SUBTASK 26-11-02-420-005

(3) The core fire detection harness, MW0325 [33] installation:

(a) Put the core fire detection harness, MW0325 [33] in position on core engine (View A, Figure 404).

(b) Install the bolts [64] to attach MW0325 harness receptacle to the bracket (View J, Figure 404).

(c) Tighten the bolts [64] to 73 in-lb (8.2 N·m) - 77 in-lb (8.7 N·m).

(d) Safety the bolts [64] with safety wire, G02345 [CP8001], or cable, G50065 [CP8006], (View X, Figure 404).

(e) Connect the fan fire detection harness, MW0315, to the core fire detection harness, MW0325 [33].

1) Tighten by hand.

WARNING

METHYL ISOBUTYL KETONE (MIK) AND ACETONE ARE TOXIC, FLAMMABLE, AND CAN BE EXPLOSIVE. DO NOT BREATHE VAPORS. USE IN A WELL-VENTILATED AREA THAT IS FREE OF SPARKS, FLAMES, AND HOT SURFACES. WEAR GOGGLES, SOLVENT-RESISTANT GLOVES, AND OTHER PROTECTIVE CLOTHING. IF SOLVENT COMES IN CONTACT WITH YOUR EYE(S), FLUSH YOUR EYE(S) WITH WATER FOR 15 MINUTES AND SEEK MEDICAL ATTENTION. IF SOLVENT COMES IN CONTACT WITH YOUR SKIN, WASH WITH SOAP AND WATER.

(f) Clean the following mating faces with acetone solvent, B01058 [CP1039] (Views F and E, Figure 404).

1) The nut [53], washer [71], and terminal lug [44].

2) The bolt [70], washer [38], bracket, and lug of ground strap [60].

3) The nut [57], washer [58], and terminal lug [45].

4) The bolt [72], washer [56], bracket, and lug of ground strap [59].

(g) Lightly coat previously cleaned mating faces with Brisal-OX 50-855 grease, D00625 [CP2338], or graphite mineral vaseline, D00601 [CP2101].

CAUTION

MAKE SURE THAT YOU INSTALL THE GROUND LUG ON THE ENGINE CORRECTLY. INCORRECT INSTALLATION OF THE GROUND LUG CAN CAUSE DAMAGE TO THE GROUND STRAP.

CAUTION

DO NOT BEND OR APPLY SIDE LOADS TO THE WIRE LUGS OR WHITE CERAMIC PART OF THE LUGS. DAMAGED WIRE LUGS CAUSE LOOP DETECTOR FAULTS. IF YOU BEND THE WIRE LUGS OR APPLY SIDE LOADS TO THE WHITE CERAMIC PIECES, DAMAGE TO THEM OCCURS.

(h) Install the bolt [51] that attaches the clamp [42] to the bracket on the core engine (View G, Figure 404).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0759

1) Install the new teflon insert [22] on the clamp [42].

LOM ALL POST SB 737-CFM56-7B-72-0759 OR POST SB 737-CFM56-7B-72-1010

NOTE: The ground strap should not be too tight or too loose (at a radius of less than 0.49 in. (12.45 mm)).

(i) Install the nut [53] and washer [71] to attach the terminal lug [44] of the core fire detection harness, MW0325 [33], to the fire detector.

(j) Install the bolt [70] and washer [38] to attach the ground strap [60] to the bracket.

(k) Install the bolt [36] and clamp [39] to attach the core fire detection harness, MW0325 [33], to the bracket on the core engine.

(l) Install nut [57] and washer [58] to attach the terminal lug [45] to the fire detector (View E, Figure 404).

(m) Install the bolt [72] and washer [56] to attach the ground strap [59] to the bracket.

(n) Install the bolt [64] and clamp [62] to attach the core fire detection harness, MW0325 [33], to the bracket on the core engine.

(o) Install the clamp [39], bolt [64], and nut [40] to attach the core fire detection harness, MW0325 [33], to the bracket on the core engine (View H, Figure 404).

(p) Make sure that the core fire detection harness, MW0325 [33], is not stressed.

(q) Make sure that the minimum clearance between harness branch and fuel manifold is 0.1 in. (2.54 mm).

(r) Make sure that the minimum clearance between the clamp [42] and Low Pressure Turbine Active Clearance Control (LPTACC) manifold is 0.2 in. (5.08 mm) (View G, Figure 404).

(s) Tighten all the bolts to 70 in-lb (7.9 N·m) - 77 in-lb (8.7 N·m).

(t) Tighten all the nuts to 25 in-lb (2.82 N·m) - 35 in-lb (3.95 N·m).

LOM ALL POST SB 737-CFM56-7B-72-0759 AND PRE SB 737-CFM56-7B-72-1010

(u) Fasten the ground strap [59] and ground strap [60] to the core fire detection harness, MW0325 [33], with the splice [80] (Views F and E, Figure 404).

NOTE: The installation of splice is only applicable for SB 737–CFM56–7B-72–0759.

1) Bend the harness to loops to take up excess length (View E, Figure 404).

2) Maximum distance between two bundles is 2 in. (51 mm).

3) Attach correctly the ground strap (Sheet 17, Figure 404).

a) Make sure that the grounding strap does not cross the harness.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0981

J. Core Fire Detection harness Installation

CAUTION	MAKE SURE THAT YOU DO NOT STRESS THE HARNESS WHEN YOU INSTALL IT. THE MINIMUM CLEARANCE MUST BE: 0.45 INCH (11.60 MM) BETWEEN THE HARNESS AND THE ADJACENT HARDWARE BUT NOT IN THE AREA OF THE BRACKETS. 0.54 INCH (13.80 MM) BETWEEN THE HARNESS AND THE ADJACENT HARDWARE IN THE AREA OF THE BRACKETS. IF THE HARNESS IS STRESSED, DAMAGE TO THEM OCCURS.

SUBTASK 26-11-02-640-004

(1) Lubricate the threads of bolts with graphite mineral vaseline, D00601 [CP2101], before their installation.

SUBTASK 26-11-02-420-007

(2) The core fire detection harness, MW0326 [31], installation:

(a) Put the core fire detection harness, MW0326 [31], in position on the core engine.

(b) Install the bolts [1] to attach the MW0326 harness receptacle to the bracket (View W, Figure 407).

(c) Tighten the bolts [1] to 73 in-lb (8.2 N·m) - 77 in-lb (8.7 N·m).

(d) Safety the bolts [1] with safety wire, G02345 [CP8001], or cable, G50065 [CP8006] (TASK 70-20-01-800-804-F00) (View X, Figure 407).

(e) Connect the MW0316 harness connector to the MW0326 harness receptacle (View X, Figure 407).

1) Tighten by hand.

(f) Install the bushing [98], clamp [20], bolt [3], and nut [80] to attach the core fire detection harness, MW0326 [31] to the bracket (View Y, Figure 407).

(g) Install the bushing [98], clamp [21], and bolt [4] to attach the core fire detection harness, MW0326 [31] to the core engine (View K, Figure 407).

(h) Install the bushing [97], clamp [22], and bolt [5] to attach the core fire detection harness, MW0326 [31] to the bracket (View P, Figure 407).

(i) Install the bushing [97], clamp [23], and bolt [6] to attach the core fire detection harness, MW0326 [31] to the bracket (View V, Figure 407).

(j) Install the bushing [98], clamp [24], and bolt [7] to attach the core fire detection harness, MW0326 [31] to the bracket (View L, Figure 407).

1) Make sure that the correct hole is used in the bracket [44] (View L, Figure 407).

(k) Install the bushings [97], clamp [25], clamp [26], clamp [27], clamp [28], clamp [29], clamp [30], clamp [31], and bolts [8] to attach the core fire detection harness, MW0326 [31] to the brackets on the core engine (Views U, T, S, R, Q, M, and N, Figure 407).

(l) Tighten the bolt [3], bolt [4], bolt [5], bolt [6], bolt [7], and bolts [8] to 73 in-lb (8.2 N·m) - 77 in-lb (8.7 N·m).

WARNING	ACETONE IS AN EXPLOSIVE, AN IRRITANT, AN ALLERGEN, AND HAS POISONOUS DETERIORATION. USE VAPOR/FUME CONTROL OR USE A RESPIRATOR. IF YOU DO NOT, IT CAN CAUSE INJURY.

(m) Clean the mating faces that follow with acetone solvent, B01058 [CP1039]:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1) The clamp [32], ground lug [60], screw [70], and bracket.
2) The clamp [33], ground lug [61], screw [71], and bracket.

> **CAUTION** MAKE SURE THAT YOU INSTALL THE GROUND LUG ON THE ENGINE CORRECTLY. INCORRECT INSTALLATION OF THE GROUND LUG CAN CAUSE DAMAGE TO THE GROUND STRAP.

(n) Install the terminal lug [62], washer [83], and nut [84] on the fire detector (View P, Figure 407).

(o) Install the bushing [97], clamp [32], ground lug [60], screw [70], and nut [81] to attach the core fire detection harness, MW0326 [31] to the bracket.

(p) Install the terminal lug [63], washer [85], and nut [86] on the fire detector (View V, Figure 407).

(q) Install the bushing [97], clamp [33], ground lug [61], screw [71], and nut [82] to attach the core fire detection harness, MW0326 [31] to the bracket.

(r) Tighten the nut [81] and nut [82] to 34 in-lb (3.8 N·m) - 36 in-lb (4.1 N·m).

1) Hold the wire lug while you apply the torque to prevent lug rotation.

> **CAUTION** DO NOT BEND OR APPLY SIDE LOADS TO THE WIRE LUGS OR WHITE CERAMIC PART OF THE LUGS. DAMAGED WIRE LUGS CAUSE LOOP DETECTOR FAULTS. IF YOU BEND THE WIRE LUGS OR APPLY SIDE LOADS TO THE WHITE CERAMIC PIECES, DAMAGE TO THEM OCCURS.

(s) Tighten the nut [84] and nut [86] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

(t) Make sure that the core fire detection harness, MW0326 [31] is not stressed.

SUBTASK 26-11-02-420-008

(3) Install the core fire detection harness, MW0325 [33]:

(a) Put the core fire detection harness, MW0325 [33] in position on the core engine.

(b) Install the bolts [2] to attach the MW0325 harness receptacle to the bracket (View J, Figure 407).

(c) Tighten the bolts [2] to 73 in-lb (8.2 N·m) - 77 in-lb (8.7 N·m).

(d) Safety the bolts [2] with safety wire, G02345 [CP8001], or cable, G50065 [CP8006] (TASK 70-20-01-800-804-F00) (View X, Figure 407).

(e) Connect the MW0315 harness connector to the MW0325 harness receptacle (View X, Figure 407).

1) Tighten by hand.

(f) Install the bushing [98], clamp [34], bolt [9], and nut [87] to attach the core fire detection harness, MW0325 [33] to the bracket (View V, Figure 407).

(g) Install the bushing [97], clamp [35], and bolt [10] to attach the core fire detection harness, MW0325 [33] to the bracket (View F, Figure 407).

(h) Install the bushing [97], clamp [36], and bolt [11] to attach the core fire detection harness, MW0325 [33] to the bracket (View E, Figure 407).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0981 (Continued)

(i) Install the bushing [98], clamp [37], and bolt [12] to attach the core fire detection harness, MW0325 [33] to the bracket (View G, Figure 407).

(j) Install the bushing [98], clamp [38], bolt [13], and nut [94] to attach the core fire detection harness, MW0325 [33] to the core engine (View H, Figure 407).

(k) Tighten the bolt [9], bolt [10], bolt [11], bolt [12], and bolt [13] to 73 in-lb (8.2 N·m) - 77 in-lb (8.7 N·m).

WARNING ACETONE IS AN EXPLOSIVE, AN IRRITANT, AN ALLERGEN, AND HAS POISONOUS DETERIORATION. USE VAPOR/FUME CONTROL OR USE A RESPIRATOR. IF YOU DO NOT, IT CAN CAUSE INJURY.

(l) Clean the mating faces that follow with acetone solvent, B01058 [CP1039]:

1) The clamp [39], ground lug [64], screw [72], and bracket.

2) The clamp [19], ground lug [65], screw [73], and bracket.

CAUTION MAKE SURE THAT YOU INSTALL THE GROUND LUG ON THE ENGINE CORRECTLY. INCORRECT INSTALLATION OF THE GROUND LUG CAN CAUSE DAMAGE TO THE GROUND STRAP.

(m) Install the terminal lug [66], washer [90], and nut [91] on the fire detector (View F, Figure 407).

(n) Install the bushing [97], clamp [39], ground lug [64], screw [72], and nut [88] to attach the core fire detection harness, MW0325 [33] to the bracket.

(o) Install the terminal lug [67], washer [92], and nut [93] on the fire detector (View E, Figure 407).

(p) Install the bushing [97], clamp [19], ground lug [65], screw [73], and nut [89] to attach the core fire detection harness, MW0325 [33] to the bracket.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-462 POST SB 737-26-1142 AND POST SB 737-CFM56-7B-72-0981; LOM 463-999 POST SB 737-CFM56-7B-72-0981

1) Make sure that the ground lug [65] is parallel with the clamp [19] (View Z, Figure 407).

a) If the ground wire loop is still large, do this step (View AA, Figure 407):

<1> Rotate the ground lug [65] up to 30 degrees counterclockwise from its parallel position with the clamp [19] (View Z, Figure 407):

NOTE: The most effective range for the lead position to minimize the ground wire loop and to prevent ground wire damage is between its parallel position with the clamp and 30 degrees counterclockwise from its parallel position.

b) If the ground wire loop is still large, do these steps:

<1> Move the ground lug [65] counterclockwise in increments of 10 degrees until the ground wire loop is minimized.

<2> If you observe the tension in the ground wire, do not continue to move the ground lug [65].

LOM ALL POST SB 737-CFM56-7B-72-0981

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0981 (Continued)

(q) Tighten the nut [88] and nut [89] to 34 in-lb (3.8 N·m) - 36 in-lb (4.1 N·m).

1) Hold the wire lug while you apply the torque to prevent lug rotation.

> **CAUTION** DO NOT BEND OR APPLY SIDE LOADS TO THE WIRE LUGS OR WHITE CERAMIC PART OF THE LUGS. DAMAGED WIRE LUGS CAUSE LOOP DETECTOR FAULTS. IF YOU BEND THE WIRE LUGS OR APPLY SIDE LOADS TO THE WHITE CERAMIC PIECES, DAMAGE TO THEM OCCURS.

(r) Tighten the nut [91] and nut [93] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

(s) Make sure that the core fire detection harness, MW0325 [33] is not stressed.

LOM ALL

K. Core Fire Detection Harness Installation Test

SUBTASK 26-11-02-040-003

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-710-002

(2) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

L. Put the Airplane Back to its Usual Condition

SUBTASK 26-11-02-010-005

> **WARNING** OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS WHEN YOU CLOSE THE THRUST REVERSERS, INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE DETECTOR HARNESS - REPAIRS

1. General

A. This procedure has two tasks:

(1) Replacement of the fan fire detector wire harness terminal lugs and ground lugs and replacement of the core fire detector wire harness terminal lugs and ground lugs for airplanes with engines PRE and POST CFM SB 72-0136 (first repair).

(2) Replacement of the core fire detector wire harness terminal lugs and ground lugs for airplanes with engines POST CFM SB 72-0269 (second or third repairs).

NOTE: You must do this repair procedure on harnesses which have the new configuration POST CFM SB 72-0258, because the terminal lugs are the same.

LOM ALL PRE SB 737-CFM56-7B-72-0258; AIRPLANES WITH FAN FIRE DETECTION WIRE HARNESS

TASK 26-11-02-960-801

2. Fan and Core Fire Detection Wire Harness Terminal Lugs and Ground Lug Replacement (Engines PRE CFM SB 72-0258 for core harnesses)

(Figure 801, Figure 802, Figure 803, Figure 804, Figure 805, Figure 806)

A. General

CAUTION

DO NOT USE CIRCULAR AND OVAL TERMINAL LUGS IN THE SAME INSTALLATION. DAMAGE TO EQUIPMENT WILL OCCUR.

(1) Do this procedure if one of the fire detector wire harness terminal lugs or ground lug is broken or almost broken.

(2) This procedure provides instructions to replace the fire detector wire harness ground lug or the fire detector wire harness terminal lugs for fan fire detector wire harnesses.

(3) This procedure provides instructions to replace the fire detector wire harness ground lug or the fire detector wire harness terminal lugs for core fire detector wire harnesses.

NOTE: This procedure is applicable for repair of core harnesses PRE and POST CFM SB 72-0136 (first repair). Do not use this procedure for repair of harnesses with new configuration POST CFM SB 72-0258.

B. References

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
26-11-02 P/B 401	ENGINE FIRE DETECTOR HARNESS - REMOVAL/INSTALLATION
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)
SWPM 20-10-14	Installation of Shrinkable Sleeves

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL PRE SB 737-CFM56-7B-72-0258; AIRPLANES WITH FAN FIRE DETECTION WIRE HARNESS (Continued)

Reference	Description
COM-13217	Crimp Tool - Hand (contact size 14 - 16) Part #: 46988 Supplier: 00779
STD-441	Gun - Heat, 500 to 800° F (260 to 427° C)

D. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
G50541	Tubing - Heat Shrinkable, Teflon Sleeve (TFE-R-5/8-X)	AS23053/12
G50544	Tubing - Heat Shrinkable, Teflon Sleeve (TFE-R-1/2-X)	AS23053/12

E. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

F. Equipment

SUBTASK 26-11-02-480-002

(1) AMP Lug crimping tool 46988 - AMP Matrix Aerospace
11 Avenue Jean d'Alembert
78190 Trappes FRANCE
or
AMP Incorporated
P.O. Box 3608
Harrisburg, PA 17105
USA
NOTE: For terminal lug and for ground lug only.

G. Prepare for the Replacement of the Fire Detector Lug

SUBTASK 26-11-02-040-006

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-010-008

WARNING OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

H. Fire Detector Harness Terminal or Ground Lug Removal

SUBTASK 26-11-02-800-002

(1) Remove only enough length of the wire harness to provide sufficient access to the lug.

NOTE: It is not necessary to remove completely the fire detection harness when you replace a lug.

NOTE: You can replace the lug at each end of the wire two times.

(a) If a third lug replacement is necessary, replace the fire detector harness (PAGEBLOCK 26-11-02/401).

SUBTASK 26-11-02-350-019

(2) Removal of the terminal or ground wire (Figure 801).

(a) Remove the nut [7], bolt [1], and washer [2] which secure the ground wire to the engine bracket to disconnect a ground lug.

(b) Remove the nut [3] and washer [4] which secure the terminal lugs to the fire detector to disconnect a terminal wire.

(c) Remove the lug insulator.

(d) Cut the cable at the lug barrel.

1) Make sure that the cut at the wire and insulation of the cable is clean and clear.

(e) Discard the damaged lug.

I. Fire Detector Terminal Lug Replacement

SUBTASK 26-11-02-350-020

CAUTION

DO NOT CAUSE DAMAGE TO THE HEAT-SHRINKABLE SLEEVE OR INSULATION SHEATH WHEN YOU REMOVE THE TFER SLEEVE.

(1) For harnesses already repaired by CFM SB 72-0136 (first repair), cut and remove the TFE-R 5/8-X tubing, G50541.

SUBTASK 26-11-02-350-021

(2) Remove enough of the heat-shrinkable sleeve so that it will line up flush with the end of the barrel of the replacement lug after installation.

SUBTASK 26-11-02-350-022

(3) Remove 0.216 in. (5.5 mm) of the insulation sheath from the end of the wire.

SUBTASK 26-11-02-350-023

(4) Make sure that the cutting of the heat-shrinkable sleeve and insulation sheath is clear and clean.

SUBTASK 26-11-02-350-024

WARNING

ISOPROPYL ALCOHOL IS FLAMMABLE. AVOID PROLONGED BREATHING OF VAPOR AND PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID CONTACT WITH EYES. CLEAN PARTS IN WELL-VENTILATED AREA AND USE APPROVED SAFETY EQUIPMENT.

(5) Clean the braid wire and insulation with alcohol, B00130 (CP1041).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB CFM56-7B-72-136 AND PRE SB 737-CFM56-7B-72-0258

SUBTASK 26-11-02-350-025

(6) Prepare the installation of the TFE-R 5/8-X tubing, G50541, on the wire.

NOTE: You must not do this step for fan fire detector wire harnesses.

(a) Cut a 1.38 in. (35 mm) long TFE-R 5/8-X tubing, G50541.

(b) Install the TFE-R 5/8-X tubing, G50541, on the insulation sheath.

1) Allow sufficient room for the installation of the lug.

LOM ALL PRE SB 737-CFM56-7B-72-0258; AIRPLANES WITH FAN FIRE DETECTION WIRE HARNESS

SUBTASK 26-11-02-350-026

(7) Install the detector lug [6] freely on the wire to check for correct position on the fire detector stud.

(a) Position the detector lug [6] on the fire detector and mark the lug and wire.

(b) Remove the detector lug [6] from the stud.

SUBTASK 26-11-02-350-027

(8) Line up the mark on the wire and detector lug [6], and crimp the detector lug [6] on the wire with the crimp tool, COM-13217 (Figure 803, Figure 804, Figure 805).

(a) Insert insulation adjustment pin of the crimp tool, COM-13217 as shown in Figure 803 to adjust the wire insulation grip.

(b) Push the locator and position the detector lug [6] in the crimping jaws.

1) Make sure that the lug rests against the locator.

(c) Close the tool handles just enough to hold the detector lug [6] within the crimping jaws.

(d) Insert the stripped wire into the lug barrel.

NOTE: Line up the marks on the lug and wire. Lug orientation must be respected. Lug angular tolerances are 10 percent.

(e) Crimp the detector lug [6] in the following two places with the crimp tool, COM-13217.

1) Close the tool handles fully to crimp the detector lug [6].

NOTE: The tool handles will open automatically after the ratchet is released.

2) On the braid wire over 0.216 in. (5.5 mm).

3) On the insulation sheath only.

NOTE: For terminal lugs, the heat-shrinkable sleeve is located at the end of the lug barrel.

(f) Remove the crimped lug from the crimping jaws.

SUBTASK 26-11-02-350-028

(9) Install the TFE-R 5/8-X tubing, G50541, on the terminal lug using heat gun, 500 to 800° F, STD-441 (SWPM 20-10-14).

(a) Install and position the sleeve over the detector lug [6] (Figure 802).

WARNING

PUT ON GLOVES WHEN YOU HEAT THE TFER SLEEVE. YOU CAN BURN YOUR HANDS.

(b) Heat the TFER sleeve to a maximum of 700°F (371°C) to shrink the sleeve.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL PRE SB 737-CFM56-7B-72-0258; AIRPLANES WITH FAN FIRE DETECTION WIRE HARNESS (Continued)

J. Replacement of the Ground Lug

NOTE: This procedure is not applicable on harnesses with the new configuration CFM SB 72-0258, since the terminal lug is changed by a metallic bobbin ground lug.

SUBTASK 26-11-02-350-029

CAUTION DO NOT CAUSE DAMAGE TO THE HEAT-SHRINKABLE SLEEVE OR INSULATION SHEATH WHEN YOU REMOVE THE TFER SLEEVE.

(1) For harnesses already repaired by CFMI SB 72-0136 (first repair), cut and remove the TFER 1/2-inch sleeve.

SUBTASK 26-11-02-350-030

(2) Remove 0.216 in. (5.5 mm) of the heat-shrinkable sleeve from the end of the wire.

SUBTASK 26-11-02-350-031

(3) Remove 0.216 in. (5.5 mm) of the insulation sheath from the end of the wire.

SUBTASK 26-11-02-350-032

(4) Make sure that the cutting of the heat-shrinkable sleeve and insulation sheath is clear and clean.

SUBTASK 26-11-02-350-033

WARNING ISOPROPYL ALCOHOL IS FLAMMABLE. AVOID PROLONGED BREATHING OF VAPOR AND PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID CONTACT WITH EYES. CLEAN PARTS IN WELL-VENTILATED AREA AND USE APPROVED SAFETY EQUIPMENT.

(5) Clean the braid wire and insulation with alcohol, B00130 (CP1041).

SUBTASK 26-11-02-350-034

(6) Prepare the installation of the TFE-R-1/2-X tubing, G50544.
   (a) Cut a 1.38 in. (35 mm) long TFE-R-1/2-X tubing, G50544.
   (b) Install the TFE-R-1/2-X tubing, G50544, on the insulation sheath.
      NOTE: Allow sufficient room for the installation of the lug.

SUBTASK 26-11-02-350-035

(7) Install the ground lug freely on the wire to check for correct position on the engine bracket.
   (a) Position the ground lug [5] on the engine bracket and mark the lug and wire.
   (b) Remove the ground lug [5] from the bracket.

SUBTASK 26-11-02-350-036

(8) Line up the mark on the wire and ground lug [5], and crimp the ground lug [5] on the wire with the crimp tool, COM-13217.
   (a) Insert insulation adjustment pin of the crimp tool, COM-13217 as shown in Figure 803 to adjust the wire insulation grip.
   (b) Push the locator and position the ground lug [5] in the crimping jaws.
      1) Make sure that the lug rests against the locator.
   (c) Close the tool handles just enough to hold the ground lug [5] within the crimping jaws.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(d) Insert the stripped wire into the lug barrel.

NOTE: Line up the marks on the lug and wire. Lug orientation must be respected. Lug angular tolerances are 10 percent.

(e) Crimp the ground lug [5] in two places with the crimp tool, COM-13217.

1) Close the tool handles fully to crimp the ground lug [5]. The tool handles will open automatically after the ratchet is released.

2) On the braid wire over 0.216 in. (5.5 mm).

3) On the heat-shrinkable sleeve and insulation sheath only.

(f) Remove the crimped lug from the crimping jaws.

SUBTASK 26-11-02-350-037

(9) Install TFE-R-1/2-X tubing, G50544, on the ground lug using heat gun, 500 to 800° F, STD-441 (SWPM 20-10-14).

(a) Install and position the sleeve over the ground lug [5] (Figure 806).

WARNING PUT ON GLOVES WHEN YOU HEAT THE TFER SLEEVE. YOU CAN BURN YOUR HANDS.

(b) Heat the TFER sleeve to a maximum of 700°F (371°C) to shrink the sleeve.

K. Fire Detector Harness Terminal or Ground Lug Installation

SUBTASK 26-11-02-350-038

(1) Installation of the terminal or ground lug (Figure 801).

(a) Position the lug on the fire detector, and install the washer [4] and nut [3] to install a terminal lug.

1) Torque the nut to 25 in-lb (3 N·m) - 35 in-lb (4.0 N·m).

(b) Position the lug on the engine bracket, and install the washer [2] and bolt [1] to install a ground lug.

1) Torque the bolts to 97 in-lb (11 N·m) - 103 in-lb (12 N·m).

L. Terminal Lug Replacement Test

SUBTASK 26-11-02-440-003

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-710-004

(2) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

M. Put the Airplane Back to its Usual Condition

SUBTASK 26-11-02-010-009

> **WARNING** OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

**FIRE DETECTOR
(EXAMPLE)**

MM-00194-01-B

H76756 S0006568059_V4

**Engine Fire Detection Harness Installation
Figure 801/26-11-02-990-803**

ECCN 9E991 BOEING PROPRIETARY - See title page for details

NOTE:

DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

1 FIRE DETECTOR LUG (PRE-CFM-SB 72-0136)

2 FIRE DETECTOR LUG (POST-CFM-SB 72-0136)

3 TERMINAL FIRE DETECTOR LUGS (POST-CFM-SB 72-0269)

MM-00196-01-B

W20137 S0006568060_V3

Engine Fire Detector Terminal Lug Replacement (Pre-CFM-SB 72-0258)
Figure 802/26-11-02-990-804 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

THIRD REPAIR TERMINAL LUG

NOTE:

DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

3 FIRE DETECTOR LUGS (POST-CFM-SB 72-0269)

MM-00228-00-B

W20383 S0006568061_V3

Engine Fire Detector Terminal Lug Replacement (Pre-CFM-SB 72-0258)
Figure 802/26-11-02-990-804 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Lug Crimping (Pre-CFM-SB 72-0258 and Post-CFM-SB 72-0136)
Figure 803/26-11-02-990-805

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SAC CONFIGURATION

DAC CONFIGURATION

NOTE:

DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

1 FIRE DETECTOR LUG (POST-CFM-SB 72-0269)

MM-00197-01-B

W19665 S0006568063_V3

Position of the Lug on the Harnesses (MW0325)
Figure 804/26-11-02-990-806

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SAC AND DAC CONFIGURATIONS

NOTE:

DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

1 FIRE DETECTOR LUG (POST-CFM-SB 72-0269)

MM-00198-01-B

W19670 S0006568064_V3

Position of the Lug on the Harnesses (MW0326)
Figure 805/26-11-02-990-807

ECCN 9E991 BOEING PROPRIETARY - See title page for details

NOTE:

DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

1 FIRE DETECTOR LUG (PRE-CFM-SB 72-0136)

2 FIRE DETECTOR LUG (POST-CFM-SB 72-0136)

MM-00195-01-B

W19678 S0006568065_V3

Replacement of Ground Fire Detector Lug
Figure 806/26-11-02-990-808

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0258

TASK 26-11-02-960-802

3. Core Fire Detection Wire Harness Terminal Lugs Replacement (Engines POST CFM SB 72-0258 or SB 72-0269)

A. General

> **CAUTION**
> DO NOT USE CIRCULAR AND OVAL TERMINAL LUGS IN THE SAME INSTALLATION. DAMAGE TO EQUIPMENT WILL OCCUR.

(1) Do this procedure if one of the fire detector wire harness terminal lugs or ground lug is broken or almost broken.

NOTE: This procedure is applicable to harnesses configuration CFM SB 72-0269 (second or third repairs) and especially to harnesses configuration CFM SB 72-0258.

(2) This procedure provides instructions to replace the fire detector wire harness terminal lugs.

NOTE: The harnesses with the new configuration (POST CFM SB 72-0258) have a metallic bobbin ground lug.

B. References

Reference	Title
26-11-00-710-801	Engine Fire Detection - Operational Test (P/B 501)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-254	Crimping Tool - Burndy Lug (Contact sizes 20 and 22) Part #: M8ND Supplier: 4A389
COM-945	Tool - Crimping (AWG 22 - 10) Part #: 47386 Supplier: 00779
COM-12557	Die Set (contact size 20 and 22) Part #: N14HT Supplier: 4A389 Part #: N14HT-5 Supplier: 4A389
COM-13900	Crimp Die - Tyco (AWG 22 - 10) Part #: 47806-2 Supplier: 00779

D. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735

E. Location Zones

Zone	Area
411	Engine 1 - Engine
421	Engine 2 - Engine

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0258 (Continued)

F. Equipment

SUBTASK 26-11-02-480-001

(1) die set, COM-12557, crimping tool, COM-254 - FCI (Framatome Connector International)
145, Rue YVES LE COZ
78035 Versailles Cedex
France
or
FCI ELECTRICAL
47, East Industrial Park Drive
P.O. Box 9507
Manchester, NH 03108-9507
USA
NOTE: For Burndy terminal lugs.

(2) crimp die, COM-13900, crimping tool, COM-945 - AMP Matrix Aerospace
11 Avenue Jean d'Alembert
78190 Trappes FRANCE
or
AMP Incorporated
P.O. Box 3608
Harrisburg, PA 17105
USA
NOTE: For Tyco terminal lugs.

G. Prepare for the Replacement of the Fire Detector Terminal Lug

SUBTASK 26-11-02-040-004

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-010-006

WARNING OBEY THE INSTRUCTIONS IN THE PROCEDURE TO OPEN THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(2) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0258 (Continued)

H. Fire Detector Harness Terminal Lug Removal

SUBTASK 26-11-02-800-001

(1) It is not necessary to remove completely the fire detection harness when you replace a lug. Remove only enough length of the wire harness to provide sufficient access to the lug.

NOTE: The lug at the end of each wire can be replaced two times only. If a third lug replacement is necessary, replace the entire fire detector harness.

SUBTASK 26-11-02-350-001

(2) Removal of the terminal or ground lug (Figure 807).

(a) To disconnect a ground lug, remove the bolt [1] and the washer [2] which secure the ground lug to the engine bracket.

NOTE: This step is required only for the old configuration harnesses (PRE SB CFM SB 72-0258).

(b) To disconnect a terminal lug, remove the nut [3], the washer [4] which secure the terminal lugs to the fire detector.

(c) Remove the lug insulator.

(d) Cut the cable at the lug barrel. Make sure that the cut at the wire and insulation of the cable is clean and clear.

(e) Discard the damaged lug.

I. Fire Detector Terminal Lug Replacement

(Figure 807, Figure 808, Figure 809).

CAUTION

MAKE SURE THE LENGTH OF THE WIRE IS SUFFICIENT FOR CRIMPING THE NEW LUG. IF THE WIRE IS CUT TOO SHORT, REPLACE THE HARNESS.

SUBTASK 26-11-02-350-015

CAUTION

DO NOT CAUSE DAMAGE TO THE HEAT-SHRINKABLE SLEEVE OR INSULATION SHEATH WHEN YOU REMOVE THE TFER SLEEVE.

(1) For harnesses already repaired by CFM SB 72-0136 (first repair), cut and remove the TFER 5/8-inch sleeve.

SUBTASK 26-11-02-350-002

(2) Remove enough of the heat-shrinkable sleeve so that it will line up flush with the end of the barrel of the replacement lug after installation.

SUBTASK 26-11-02-350-003

(3) Remove 0.217 ±0.012 in. (5.5 ±0.3 mm) of the insulation sheath from the end of the wire.

SUBTASK 26-11-02-350-004

(4) Make sure the cutting of the heat-shrinkable sleeve and insulation sheath is clear and clean.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0258 (Continued)

SUBTASK 26-11-02-350-005

> **WARNING**
> ISOPROPYL ALCOHOL IS FLAMMABLE. AVOID PROLONGED BREATHING OF VAPOR AND PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID CONTACT WITH EYES. CLEAN PARTS IN WELL-VENTILATED AREA AND USE APPROVED SAFETY EQUIPMENT.

(5) Clean the braid wire and insulation with alcohol, B00130 (CP1041).

SUBTASK 26-11-02-350-006

(6) Install the terminal lug freely on the wire to check for correct position on the fire detector stud.

NOTE: You must use the Burndy or Tyco terminal lug (7).

(a) Position the terminal lug (7) on the fire detector stud and mark the lug and wire.

(b) Remove the lug (7) from the stud.

SUBTASK 26-11-02-350-007

(7) Line up the mark on the wire and Burndy or Tyco terminal lug (7), and crimp the lug (7) on the wire with the crimping tool, COM-254 or the crimping tool, COM-945 (Figure 807, Figure 808, Figure 809, Figure 810).

> **WARNING**
> DO NOT USE THE AMP CRIMP TOOL & DIE TO CRIMP THE FIRE DETECTOR WIRE HARNESS BURNDY TERMINAL LUGS. DO NOT USE THE FCI CRIMP TOOL & DIE TO CRIMP THE FIRE DETECTOR WIRE HARNESS TYCO TERMINAL LUGS.
>
> BE CAREFUL TO ADJUST THE TOOL AND JAWS BEFORE USING THE FCI OR AMP CRIMP TOOL.

(a) Take a crimping tool, COM-254 or a crimping tool, COM-945; and the die set, COM-12557 or crimp die, COM-13900; with the jaws, N14HT-5.

(b) Make sure that the crimping tool is correctly adjusted.

(c) Position the lug [7] in the crimping jaw hole No. 14.

(d) Make sure that the lug [7] is located in the right position (Figure 811).

(e) Close the tool handles just enough to hold the lug [7] within the crimping jaws.

(f) Insert the stripped wire into the lug barrel.

NOTE: Line up the marks on the lug and wire. Lug orientation must be respected. Lug angular tolerances are 10 percent.

(g) Crimp the lug ([7] in the following two places with the crimping tool.

NOTE: Close the tool handles fully to crimp the lug [7]. The tool handles will open automatically after the ratchet is released.

1) On the braid wire over 0.217 ±0.012 in. (5.5 ±0.3 mm).

2) On the insulation sheath only.

NOTE: For terminal lugs, the heat-shrinkable sleeve is located at the end of the lug barrel.

(h) Remove the crimped lug from the crimping jaws.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL POST SB 737-CFM56-7B-72-0258 (Continued)

J. Fire Detector Harness Terminal Lug Installation

SUBTASK 26-11-02-350-014

(1) Installation of the terminal or ground lug (Figure 807).

(a) To install a ground lug, position the lug on the engine bracket, and install the washer [2] and bolt [1].

NOTE: This step is necessary only for the old configuration harnesses (PRE CFM SB 72-0258).

1) Tighten the bolt to 102.5 ±7.5 in-lb (11.6 ±0.9 N·m).

(b) To install a terminal lug, position the lug on the fire detector, and install the washer [4] and nut [3].

1) Tighten the nut to 30 ±5 in-lb (3.4 ±0.6 N·m).

K. Terminal Lug Replacement Test

SUBTASK 26-11-02-440-002

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-11-02-710-003

(2) Do this task: Engine Fire Detection - Operational Test, TASK 26-11-00-710-801.

L. Put the Airplane Back to its Usual Condition

SUBTASK 26-11-02-010-007

WARNING OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

NOTE:

DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

1 TERMINAL FIRE DETECTOR LUGS (POST-CFM-SB 72-0269)

MM-00230-00-B

W19690 S0006568067_V3

Engine Fire Detector Terminal Lug Replacement
Figure 807/26-11-02-990-809

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SAC CONFIGURATION

DAC CONFIGURATION

NOTE:

DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

1 FIRE DETECTOR LUGS (POST-CFM-SB 72-0269)

MM-00231-00-B

W19817 S0006568068_V3

Position of the Lug On the Harnesses (MW0325)
Figure 808/26-11-02-990-810

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SAC AND DAC CONFIGURATIONS

NOTE:

DIMENSIONS ARE IN INCHES WITH MILLIMETERS IN PARENTHESES.

1 FIRE DETECTOR LUGS (POST-CFM-SB 72-0269)

MM-00232-00-B

W19812 S0006568069_V3

Position of the Lug on the Harnesses (MW0326)
Figure 809/26-11-02-990-811

ECCN 9E991 BOEING PROPRIETARY - See title page for details

MM-00199-01-B

W19713 S0006568070_V3

Position of the Lug on the Harnesses (MW0325 and MW0326)
Figure 810/26-11-02-990-812

ECCN 9E991 BOEING PROPRIETARY - See title page for details

MM-00201-01-B

W19708 S0006568071_V2

Lug Crimping (Post-CFM-SB 72-0258)
Figure 811/26-11-02-990-813

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LAVATORY SMOKE DETECTION - ADJUSTMENT/TEST

1. **General**
   A. This procedure does a test of the lavatory smoke detectors.
   B. Each lavatory has a smoke detector installed in the ceiling. When the concentration of smoke at the sensor gets to a preset threshold, the smoke detector alarm occurs.
   C. You cannot adjust the sensitivity of the smoke detector. If the smoke detector does not work correctly, replace the smoke detector.
   D. Refer to Figure 501 or Figure 504 to determine if JAMCO ionization smoke detectors or KIDDE PHOTOELECTRIC detectors are fitted to airplane.

LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS

TASK 26-14-00-710-802

2. **Lavatory Smoke Detection - Self Test**
   (Figure 504)

   A. Self Test using the self test switch on the smoke detectors

   SUBTASK 26-14-00-860-014

   (1) Make sure that this circuit breaker is closed:

   CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

   SUBTASK 26-14-00-710-010

   (2) Push and hold the SELF TEST switch on the smoke detector with a small screwdriver, or other appropriate tool.

   SUBTASK 26-14-00-710-011

   (3) Make sure these alarm indications occur:
      (a) Lavatories:
         1) The LED status indicator turns to a solid red light on the smoke detector.
         2) You can hear the smoke detector alarm horn in the lavatory.

LOM 427, 428, 437, 438

      (b) Passenger compartment:
         1) The lavatory call reset switch flashes on the outside of the lavatory, above the door.
         2) The attendant chime is heard through the Passenger Address (PA) system.
         3) The amber master call light on the exit locator sign is flashing.

LOM 427, 428

      (c) Attendant Control Panel (Figure 505):
         1) A smoke detection warning message shows in the Smoke Detector Monitor window of the Attendant Smoke Detection Control panels.

            NOTE: A warning message indicates which lavatory the smoke detectors have been activated. Both forward and aft control panels show the same warning message.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 427, 428, 437, 438

(d) Flight compartment:

1) The amber LAVATORY SMOKE light on the Miscellaneous Alert section of the forward overhead panel comes on.

2) The MASTER CAUTION light comes on.

LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS

SUBTASK 26-14-00-710-013

(4) Release the SELF TEST switch.

(a) Make sure all external alarm indications stop.

END OF TASK

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS

TASK 26-14-00-730-801

3. Lavatory Smoke Detection - Smoke Test

(Figure 501)

NOTE: This procedure is a scheduled maintenance task.

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-11202	Smoke Generator - Lavatory/Crew Rest Smoke Detector (or 737 Cargo Area Type Smoke Detectors) Part #: HO-25S Supplier: 61908 Part #: SOLOA10 Supplier: 1WU32 Opt Part #: SOLOA3 Supplier: 1WU32 Opt Part #: SOLOA4 Supplier: 1WU32

B. Location Zones

Zone	Area
200	Upper Half of Fuselage
211	Flight Compartment - Left

C. Prepare for the Test

SUBTASK 26-14-00-860-002

(1) Make sure that this circuit breaker is closed:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

D. Smoke Test

SUBTASK 26-14-00-860-003

(1) Make sure that the green power indicator light on the lavatory smoke detector is on, if applicable.

NOTE: Some detectors have plugged green power indicator with plug-button.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL

SUBTASK 26-14-00-730-007

(2) Use a smoke generator, COM-11202, to make smoke adjacent to the lavatory smoke detector.

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS

SUBTASK 26-14-00-750-004

(3) Make sure that the red alarm light on the lavatory smoke detector comes on.

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS PU90-461 OR PU90-499

SUBTASK 26-14-00-750-006

(4) Make sure that you hear the smoke detector alarm horn in the lavatory.

NOTE: The smoke detector PU90–461 has pulsating alarm horn sound.
The smoke detector PU90–499 has steady alarm horn sound.

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS PU90-429

SUBTASK 26-14-00-750-008

(5) Make sure that these forward cabin attendants' panel alarm indications occur (Figure 502):

(a) SMOKE DETECTOR panel:

1) You can hear the alarm horn.
2) The SMOKE DETECT light flashes.
3) The applicable location light flashes.

LOM 427, 428, 437, 438

SUBTASK 26-14-00-750-009

(6) Make sure that these alarm indications occur in the passenger compartment:

(a) The lavatory call reset switch flashes on the outside of the lavatory, above the door.
(b) The attendant chime is heard through the passenger address (PA) system.
(c) The amber master call light on the exit locator sign is flashing.

SUBTASK 26-14-00-750-010

(7) Make sure that these alarm indications occur in the flight compartment:

(a) The amber LAVATORY SMOKE light on the Miscellaneous Alert section of the forward overhead panel comes on.
(b) The MASTER CAUTION light comes on.

LOM 427, 428

SUBTASK 26-14-00-750-011

(8) Make sure that these Attendant Control Panel alarm indications occur (Figure 503):

(a) A smoke detection warning message shows in the Smoke Detector Monitor window of the Attendant Smoke Detection Control panels.

NOTE: A warning message indicates which lavatory the smoke detectors have been activated. Both forward and aft control panels show the same warning message.

(b) The attendant chime is heard through the passenger address (PA) system.

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS PU90-429

SUBTASK 26-14-00-730-006

(9) Push the HORN INTERRUPT and RESET switch on the control panel.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS PU90-429 (Continued)

(a) Make sure that all of the external alarm indications stop.

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS PU90-461 OR PU90-499

SUBTASK 26-14-00-730-003

(10) Push the ALARM INTERRUPT switch on the smoke detector with an applicable tool.

(a) Make sure that all of the alarm indications stop.

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS

SUBTASK 26-14-00-860-004

(11) Clear the smoke from the lavatory.

NOTE: If the smoke is not cleared from the lavatory within 60 seconds, the smoke indications will occur again.

LOM ALL

SUBTASK 26-14-00-730-005

(12) Do the Smoke Test again for each of the other lavatory smoke detectors.

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Lavatory Smoke Detection Adjustment
Figure 501/26-14-00-990-801 (Sheet 1 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LAVATORY (EXAMPLE)

LAVATORY SMOKE DETECTOR

A

F59298 S0006568078_V2

Lavatory Smoke Detection Adjustment
Figure 501/26-14-00-990-801 (Sheet 2 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LAVATORY
(EXAMPLE)

LAVATORY SMOKE DETECTOR

A

2810779 S0000646014_V3

Lavatory Smoke Detection Adjustment
Figure 501/26-14-00-990-801 (Sheet 3 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FORWARD CABIN ATTENDANTS' PANEL

G77864 S0006568080_V2

Cabin Attendants Panel
Figure 502/26-14-00-990-809

ECCN 9E991 BOEING PROPRIETARY - See title page for details

**ATTENDANT SMOKE DETECTION CONTROL PANEL
(TYPICAL)**

2061821 S0000424656_V2

**Attendant Smoke Detection Control Panel
Figure 503/26-14-00-990-810**

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS

TASK 26-14-00-730-802

4. Lavatory Smoke Detection - Smoke Test

(Figure 504)

NOTE: This procedure is a scheduled maintenance task.

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-11202	Smoke Generator - Lavatory/Crew Rest Smoke Detector (or 737 Cargo Area Type Smoke Detectors) Part #: HO-25S Supplier: 61908 Part #: SOLOA10 Supplier: 1WU32 Opt Part #: SOLOA3 Supplier: 1WU32 Opt Part #: SOLOA4 Supplier: 1WU32

B. Location Zones

Zone	Area
200	Upper Half of Fuselage
211	Flight Compartment - Left

C. Prepare for the Test

SUBTASK 26-14-00-860-018

(1) Make sure that this circuit breaker is closed:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

D. Smoke Test

SUBTASK 26-14-00-860-019

(1) Make sure that the LED status indicator on the lavatory smoke detector is a solid green light.

LOM ALL

SUBTASK 26-14-00-730-010

(2) Use a smoke generator, COM-11202, to make smoke adjacent to the lavatory smoke detector.

LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS

SUBTASK 26-14-00-750-012

(3) Make sure that the LED status indicator on the lavatory smoke detector is a solid red light.

SUBTASK 26-14-00-750-016

(4) Make sure that you hear the smoke detector alarm horn in the lavatory.

LOM 427, 428, 437, 438

SUBTASK 26-14-00-750-013

(5) Make sure that these alarm indications occur in the passenger compartment:

(a) The lavatory call reset switch flashes on the outside of the lavatory, above the door.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 427, 428, 437, 438 (Continued)

(b) The attendant chime is heard through the passenger address (PA) system.

(c) The amber master call light on the exit locator sign is flashing.

SUBTASK 26-14-00-750-014

(6) Make sure that these alarm indications occur in the flight compartment:

(a) The amber LAVATORY SMOKE light on the Miscellaneous Alert section of the forward overhead panel comes on.

(b) The MASTER CAUTION light comes on.

LOM 427, 428

SUBTASK 26-14-00-750-015

(7) Make sure that these Attendant Control Panel alarm indications occur (Figure 505):

(a) A smoke detection warning message shows in the Smoke Detector Monitor window of the Attendant Smoke Detection Control panels.

NOTE: A warning message indicates which lavatory the smoke detectors have been activated. Both forward and aft control panels show the same warning message.

(b) The attendant chime is heard through the passenger address (PA) system.

LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS

SUBTASK 26-14-00-730-012

(8) Push the horn cancel switch on the smoke detector with an applicable tool.

(a) Make sure that all of the alarm indications stop.

NOTE: The LED status indicator will stay red if smoke is still sensed. The LED status indicator will come on green when the smoke sensor no longer detects smoke.

SUBTASK 26-14-00-860-020

(9) Clear the smoke from the lavatory.

NOTE: If the smoke is not cleared from the lavatory within 60 seconds, the smoke indications will occur again.

LOM ALL

SUBTASK 26-14-00-730-013

(10) Do the Smoke Test again for each of the other lavatory smoke detectors.

LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LAVATORY
(EXAMPLE)

LAVATORY SMOKE DETECTOR
(EXAMPLE)

A

1895411 S0000346465_V3

Lavatory Smoke Detection Adjustment
Figure 504/26-14-00-990-805 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LAVATORY
(EXAMPLE)

LAVATORY SMOKE DETECTOR
(EXAMPLE)

A

3033457 S0000803437_V1

Lavatory Smoke Detection Adjustment
Figure 504/26-14-00-990-805 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

**ATTENDANT SMOKE DETECTION CONTROL PANEL
(TYPICAL)**

2061821 S0000424656_V2

**Attendant Smoke Detection Control Panel
Figure 505/26-14-00-990-811**

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LAVATORY SMOKE DETECTOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the lavatory smoke detector.

(2) An installation of the lavatory smoke detector.

B. Jamco and Kidde lavatory smoke detectors are interchangeable.

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS

TASK 26-14-01-000-801

2. Lavatory Smoke Detector Removal

(Figure 401)

A. General

(1) This task gives instructions to remove the lavatory smoke detector.

B. References

Reference	Title
26-14-01-100-801	Lavatory Smoke Detector Cleaning (P/B 701)

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Prepare for the Removal

SUBTASK 26-14-01-860-003

(1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

E. Lavatory Smoke Detector Removal

SUBTASK 26-14-01-020-002

(1) Loosen the face plate screws [3] on the face plate [4] of the smoke detector [11].

SUBTASK 26-14-01-020-003

(2) Remove the face plate [4] from the smoke detector case [7].

SUBTASK 26-14-01-020-010

(3) Remove the washers [18] from the face plate screws [3] that are attached to the face plate [4].

SUBTASK 26-14-01-020-004

(4) Remove the mounting screws [5] that hold the smoke detector [11] to the ceiling bracket [1].

SUBTASK 26-14-01-020-005

(5) Disconnect the electrical connector [6] on the smoke detector [11] from the airplane electrical connector.

SUBTASK 26-14-01-020-006

(6) Remove the smoke detector [11] and ceiling bracket [1] from the ceiling.

NOTE: You do not have to remove the ceiling bracket from the smoke detector. The new smoke detector will usually have a ceiling bracket attached to it.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-14-01-160-003

(7) If it is necessary, do this task: Lavatory Smoke Detector Cleaning, TASK 26-14-01-100-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

NOTE:

THE SCREWS ATTACHED TO THE FACE PLATE CANNOT BE REMOVED.

Lavatory Smoke Detector Installation
Figure 401/26-14-01-990-802 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

NOTE:

THE SCREWS ATTACHED TO THE FACE PLATE CANNOT BE REMOVED.

Lavatory Smoke Detector Installation
Figure 401/26-14-01-990-802 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS

TASK 26-14-01-000-802

3. Lavatory Smoke Detector Removal (Kidde)

(Figure 402)

A. General

(1) This task gives instructions to remove the Lavatory Smoke Detector.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Prepare for the Removal

SUBTASK 26-14-01-860-010

(1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

D. Lavatory Smoke Detector Removal

SUBTASK 26-14-01-020-008

(1) Remove the screws [14] and spacers [15] that attach the smoke detector [11] to the mounting bracket [13].

SUBTASK 26-14-01-020-007

(2) Disconnect the electrical connector [12].

SUBTASK 26-14-01-020-009

(3) Remove the smoke detector [11] and mounting bracket [13] from the ceiling.

NOTE: You do not have to remove the mounting bracket from the smoke detector. The new smoke detector will usually have a mounting bracket attached to it.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1895422 S0000346841_V7

Lavatory Smoke Detector Installation
Figure 402/26-14-01-990-804

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS

TASK 26-14-01-400-801

4. Lavatory Smoke Detector Installation

(Figure 401)

A. General

(1) This task gives instructions to install the lavatory smoke detector.

B. References

Reference	Title
24-22-00-860-812	Remove Electrical Power (P/B 201)
26-14-00-730-801	Lavatory Smoke Detection - Smoke Test (P/B 501)

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Prepare for the Installation

SUBTASK 26-14-01-860-004

(1) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

E. Lavatory Smoke Detector Installation

SUBTASK 26-14-01-420-002

(1) Do these steps before you put the smoke detector [11] in its position in the lavatory ceiling:

(a) If the Lanyard [2] is not connected to the smoke detector [11], attach the Lanyard [2] from the ceiling bracket [1] to the smoke detector [11].

(b) If the ceiling bracket [1] is not connected to the smoke detector [11], install the ceiling bracket [1] to the smoke detector [11] with the mounting screws [5].

NOTE: Do not tighten the mounting screws at this time. The ceiling bracket must be attached loosely to the smoke detector.

(c) Connect the airplane electrical connector to the electrical connector [6] on the smoke detector [11].

SUBTASK 26-14-01-420-003

(2) Put the smoke detector [11] and ceiling bracket [1] in the correct position in the lavatory ceiling.

SUBTASK 26-14-01-420-004

(3) Push the mounting screw [5] until the ceiling bracket [1] is in the correct position.

SUBTASK 26-14-01-420-005

(4) Tighten the mounting screws [5] which hold the ceiling bracket [1] in position.

SUBTASK 26-14-01-420-012

(5) Install the washers [18] onto the face plate screws [3].

SUBTASK 26-14-01-420-006

(6) Put the face plate [4] on the smoke detector [11].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS (Continued)

SUBTASK 26-14-01-420-007

(7) Tighten the face plate screws [3].

SUBTASK 26-14-01-860-005

(8) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

F. Lavatory Smoke Detector Installation Test

SUBTASK 26-14-01-710-002

(1) Do this task: Lavatory Smoke Detection - Smoke Test, TASK 26-14-00-730-801.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 26-14-01-840-001

(1) Do this task: Remove Electrical Power, TASK 24-22-00-860-812.

END OF TASK

LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS

TASK 26-14-01-400-802

5. Lavatory Smoke Detector Installation (Kidde)

(Figure 402)

A. General

(1) This task gives instructions to install the Lavatory Smoke Detector.

B. References

Reference	Title
26-14-00-710-802	Lavatory Smoke Detection - Self Test (P/B 501)
26-14-00-730-802	Lavatory Smoke Detection - Smoke Test (P/B 501)

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Prepare for the Installation

SUBTASK 26-14-01-860-011

(1) Make sure that this circuit breaker is open and has safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

E. Lavatory Smoke Detector Installation

SUBTASK 26-14-01-420-011

(1) Do these steps before you put the smoke detector [11] in its position in the ceiling:

(a) If the lanyard [16] is not connected to the smoke detector [11], attach the lanyard [16] from the mounting bracket [13] to the smoke detector [11] with the screw [17].

1) Tighten the screw [17] to 5 in-lb (0.56 N·m) - 6 in-lb (0.68 N·m).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) If the mounting bracket [13] is not connected to the smoke detector [11], attach the mounting bracket [13] to the smoke detector [11] with the spacers [15] and screws [14].

1) Do not tighten the screws [14] at this time.

NOTE: The mounting bracket must be attached loosely to the smoke detector.

(c) Connect the electrical connector [12] to the smoke detector [11].

SUBTASK 26-14-01-420-010

(2) Put and hold the smoke detector [11] and mounting bracket [13] in the correct position in the ceiling.

SUBTASK 26-14-01-420-008

(3) Install the screws [14] to connect the smoke detector [11] to the mounting bracket [13].

SUBTASK 26-14-01-420-009

(4) Tighten the screws [14] to 9 in-lb (1.0 N·m) - 10 in-lb (1.1 N·m).

SUBTASK 26-14-01-860-007

(5) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

F. Lavatory Smoke Detector Installation Test

SUBTASK 26-14-01-710-003

(1) Do this task: Lavatory Smoke Detection - Self Test, TASK 26-14-00-710-802.

SUBTASK 26-14-01-710-006

(2) Do this task: Lavatory Smoke Detection - Smoke Test, TASK 26-14-00-730-802.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LAVATORY SMOKE DETECTOR - CLEANING/PAINTING

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has a task which cleans the lavatory smoke detector.

C. Each lavatory has a smoke detector installed in the ceiling.

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS

TASK 26-14-01-100-801

2. Lavatory Smoke Detector Cleaning

(Figure 701)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
26-14-00-730-801	Lavatory Smoke Detection - Smoke Test (P/B 501)

B. Tools/Equipment

Reference	Description
STD-1086	Gloves - Rubber
STD-3939	Air Source - Regulated, Dry Filtered, 0 to 10 psig

C. Consumable Materials

Reference	Description	Specification
B00065	Alcohol - Denatured, Ethyl (Ethanol)	AMS 3002 (Supersedes O-A-396)
B00541	Cleaner - General Purpose Household Detergent	
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)

D. Location Zones

Zone	Area
200	Upper Half of Fuselage
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Lavatory Smoke Detector Cleaning

SUBTASK 26-14-01-860-001

(1) Open this circuit breaker and install safety tag:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS (Continued)

SUBTASK 26-14-01-160-001

> **WARNING**
> WHEN YOU CLEAN THE SMOKE DETECTOR AND SENSOR, MAKE SURE THAT THE AREA HAS SUFFICIENT AIRFLOW. KEEP THE ALCOHOL AWAY FROM HEAT, SPARKS OR FLAMES. DO NOT BREATHE THE FUMES FROM THE ALCOHOL. PUT ON RUBBER GLOVES. ALCOHOL IS A FLAMMABLE AND POISONOUS SOLVENT WHICH CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Put on the rubber glove, STD-1086.

SUBTASK 26-14-01-160-002

(3) Remove the dirt from the exterior of the case cover [1] with the cotton wiper, G00034, soaked with alcohol, B00065.

SUBTASK 26-14-01-020-001

(4) Do these steps to remove and disassemble the smoke sensor assembly [4]:

(a) Insert the pocket scale between the smoke sensor assembly [4] and case cover [1].

(b) Push the spring lever [2] with the pocket scale and pull out the smoke sensor assembly [4].

(c) Slide the screwdriver between each side of the sensor cell assembly [6] and cover [7] and twist the screwdriver to release the lockpins.

(d) Remove the cover [7] from the sensor cell assembly [6].

> **WARNING**
> DO NOT DISASSEMBLE THE SENSOR CELL ASSEMBLY. THE SENSOR CELL CONTAINS RADIOACTIVE MATERIAL. THE RADIOACTIVE MATERIAL CAN CAUSE INJURIES TO PERSONNEL.

> **CAUTION**
> DO NOT TOUCH THE ELECTRODE IN THE SENSOR ASSEMBLY. DAMAGE TO THE SMOKE SENSOR CAN OCCUR.

(e) Pull the mesh [8] from the sensor cell assembly [6].

SUBTASK 26-14-01-210-001

(5) Do these steps to clean the mesh [8] and sensor cell assembly [6]:

(a) Examine the mesh [8] for contamination.

(b) To remove contamination, clean the mesh [8] with general purpose household detergent cleaner, B00541, and warm water.

(c) If the mesh [8] is very dirty, replace it with a new mesh [8].

(d) With the 0 to 10 psig air source, STD-3939, dry the mesh [8] completely.

> **CAUTION**
> BLOW THE AIR LIGHTLY INTO THE SENSOR ASSEMBLY. TOO MUCH FORCE CAN CAUSE STATIC ELECTRICITY ON THE ELECTRODES WHICH CAN CAUSE DAMAGE TO THE SMOKE SENSOR.

(e) With the 0 to 10 psig air source, STD-3939, lightly blow any dirt or particles out of the sensor cell assembly [6].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH JAMCO IONIZATION DETECTORS (Continued)

SUBTASK 26-14-01-420-001

(6) Do these steps to assemble and install the smoke sensor assembly [4]:

(a) Install the mesh [8] on the sensor cell assembly [6].

(b) Align the hole in the cover [7] with the hole in the sensor cell assembly [6].

(c) Install the cover [7] on the sensor cell assembly [6].

(d) Install the smoke sensor assembly [4] in the case cover [1].

SUBTASK 26-14-01-860-002

(7) Remove the safety tag and close this circuit breaker:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
E	12	C01125	LAVATORY SMOKE

SUBTASK 26-14-01-710-001

(8) Do this task: Lavatory Smoke Detection - Smoke Test, TASK 26-14-00-730-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Lavatory Smoke Detector Cleaning
Figure 701/26-14-01-990-803 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1 SELF-TEST SWITCH IS NOT APPLICABLE TO PU90-499 SERIES.

Lavatory Smoke Detector Cleaning
Figure 701/26-14-01-990-803 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS

TASK 26-14-01-100-802

3. Lavatory Smoke Detector Cleaning

(Figure 702)

A. References

Reference	Title
26-14-01-000-802	Lavatory Smoke Detector Removal (Kidde) (P/B 401)
26-14-01-400-802	Lavatory Smoke Detector Installation (Kidde) (P/B 401)

B. Tools/Equipment

Reference	Description
STD-123	Brush - Soft Bristle
STD-4107	Source - Air, Clean, Dry, 0 to 60 psi
STD-6402	Swab - Cotton

C. Consumable Materials

Reference	Description	Specification
B50026	Soap - Clear Liquid Dishwashing	
B50073	Alcohol - Isopropyl	ASTM D 770
G01043	Cloth - Lint-free	
G50527	Water	

D. Location Zones

Zone	Area
200	Upper Half of Fuselage
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the Cleaning

SUBTASK 26-14-01-000-003

(1) Do this task: Lavatory Smoke Detector Removal (Kidde), TASK 26-14-01-000-802.

SUBTASK 26-14-01-000-004

CAUTION

BE CAREFUL WHEN YOU REMOVE OR INSTALL THE SCREEN OF THE COVER ASSEMBLY AND LABYRINTH. THIS WILL HELP PREVENT SCRATCHES ON THE LABYRINTH. SCRATCHES ON THE LABYRINTH CAN CAUSE STRAY LIGHT REFLECTIONS AND INCORRECT CALIBRATIONS TO OCCUR.

CAUTION

ESDS COMPONENTS AND UNITS MUST BE PROTECTED FROM STATIC DISCHARGE DAMAGE AT ALL TIMES.

(2) Disassemble the lavatory smoke detector as follows:

(a) Remove the screws [13] and washers [14] that attach the cover/Electro-Magnetic Interference (EMI) gasket assembly to the housing/screen assembly [11].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) Remove the slide-lock-post [16] and washer [17] that attach the bonding jumper [19] to the connector [18].

NOTE: The slide-lock-post can include one washer, one hex nut, and one slide-lock-post.

(c) Remove the remaining slide-lock-post [16] and washer [17] that attach the connector [18] to the housing/screen assembly [11].

NOTE: The slide-lock-post can include one hex nut, one lock washer, one flat washer, and one slide-lock-post.

(d) Pull the connector [18] back inside the housing/screen assembly [11].

(e) Remove the gasket [20].

(f) Remove the EMI gasket [28] from the cover [15].

1) If it is necessary, remove the nut [31], lock washer [30], and flat washer [29] to disconnect the bonding jumper [32] from the cover/EMI gasket assembly.

(g) Remove the screws [21] and washers [22] that connect the CCA and labyrinth assembly [12] to the housing/screen assembly [11].

(h) Remove the CCA and labyrinth assembly [12].

(i) Disconnect the connector [27] from the CCA and labyrinth assembly [12].

(j) Remove the fasteners [23], washers [24], and nuts [25] that attach the labyrinth top [26] to the CCA and labyrinth assembly [12].

F. Lavatory Smoke Detector Cleaning

SUBTASK 26-14-01-100-003

CAUTION ESDS COMPONENTS AND UNITS MUST BE PROTECTED FROM STATIC DISCHARGE DAMAGE AT ALL TIMES.

(1) Clean the labyrinth assembly.

(a) Make a solution of soap and water with one part soap, B50026, and twenty parts water, G50527.

WARNING WHEN YOU USE THE COMPRESSED AIR TO CLEAN, TO COOL OR TO DRY, DO NOT EXCEED 30 PSIG (207 KPA). MAKE SURE YOU WEAR EYE PROTECTION AND DO NOT DIRECT COMPRESSED AIR AT YOURSELF AND OTHERS. INJURY TO PERSONNEL CAN OCCUR.

CAUTION DO NOT PUT THE LABYRINTH FULLY IN THE SOAP AND WATER SOLUTION WHEN YOU CLEAN THE LABYRINTH. LARGE QUANTITIES OF THE SOAP AND WATER SOLUTION CAN CAUSE DAMAGE TO THE LABYRINTH.

(b) Use a soft bristle brush, STD-123, and dry, clean air source 0 to 60 psi, STD-4107, at maximum pressure of 30 psig (207 kPa) to remove the unwanted material from the inner area of the labyrinth.

NOTE: You can also use the soap and water solution. Remove the soap and water solution with clean water.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(c) Clean the inner area of the labyrinth with a clean cotton swab, STD-6402, moist with the soap and water solution.

(d) Dry the lenses with a clean and dry cotton swab, STD-6402.

(e) Remove the remaining soap or contamination from the lenses.

(f) Make sure that the labyrinth assembly is fully dry before you assemble the smoke detector.

SUBTASK 26-14-01-100-004

(2) If it is necessary, clean the screen of the housing/screen assembly [11].

> **WARNING** WHEN YOU USE THE COMPRESSED AIR TO CLEAN, TO COOL OR TO DRY, DO NOT EXCEED 30 PSIG (207 KPA). MAKE SURE YOU WEAR EYE PROTECTION AND DO NOT DIRECT COMPRESSED AIR AT YOURSELF AND OTHERS. INJURY TO PERSONNEL CAN OCCUR.

(a) Use a soft bristle brush, STD-123, or dry, clean air source 0 to 60 psi, STD-4107, at maximum pressure of 30 psig (207 kPa) to remove unwanted materials from the screen.

SUBTASK 26-14-01-100-005

(3) Do these steps to clean all non-electrical parts:

> **WARNING** ISOPROPYL ALCOHOL IS FLAMMABLE. AVOID PROLONGED BREATHING OF VAPOR AND PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID CONTACT WITH EYES. CLEAN PARTS IN WELL-VENTILATED AREA AND USE APPROVED SAFETY EQUIPMENT.

(a) Clean the external surfaces with lint-free cloth, G01043, moist with alcohol, B50073.

(b) Dry the surfaces with dry lint-free cloth, G01043.

SUBTASK 26-14-01-100-006

> **CAUTION** ESDS COMPONENTS AND UNITS MUST BE PROTECTED FROM STATIC DISCHARGE DAMAGE AT ALL TIMES.

(4) Clean the connectors and other electrical components as follows:

> **WARNING** ISOPROPYL ALCOHOL IS FLAMMABLE. AVOID PROLONGED BREATHING OF VAPOR AND PROLONGED OR REPEATED CONTACT WITH SKIN. AVOID CONTACT WITH EYES. CLEAN PARTS IN WELL-VENTILATED AREA AND USE APPROVED SAFETY EQUIPMENT.

(a) Clean the circuit card and connectors with the soft bristle brush, STD-123, and alcohol, B50073.

> **WARNING** WHEN YOU USE THE COMPRESSED AIR TO CLEAN, TO COOL OR TO DRY, DO NOT EXCEED 30 PSIG (207 KPA). MAKE SURE YOU WEAR EYE PROTECTION AND DO NOT DIRECT COMPRESSED AIR AT YOURSELF AND OTHERS. INJURY TO PERSONNEL CAN OCCUR.

(b) Dry the parts with the dry, clean air source 0 to 60 psi, STD-4107, at a maximum pressure of 30 psig (207 kPa).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G. Put the Airplane Back to Its Usual Condition

SUBTASK 26-14-01-420-014

CAUTION	BE CAREFUL WHEN YOU REMOVE OR INSTALL THE SCREEN OF THE COVER ASSEMBLY AND LABYRINTH. THIS WILL HELP PREVENT SCRATCHES ON THE LABYRINTH. SCRATCHES ON THE LABYRINTH CAN CAUSE STRAY LIGHT REFLECTIONS AND INCORRECT CALIBRATIONS TO OCCUR.

CAUTION	ESDS COMPONENTS AND UNITS MUST BE PROTECTED FROM STATIC DISCHARGE DAMAGE AT ALL TIMES.

(1) Assemble the lavatory smoke detector as follows:

(a) Install the fasteners [23], washers [24], and nuts [25] to attach the labyrinth top [26] to the CCA and labyrinth assembly [12].

1) Tighten the nuts [25] to 4 in-lb (0.45 N·m) - 5 in-lb (0.56 N·m).

(b) Connect the connector [27] to the CCA and labyrinth assembly [12].

(c) Install the screws [21] and washers [22] to attach the CCA and labyrinth assembly [12] to the housing/screen assembly [11].

1) Tighten the screws [21] to 8 in-lb (0.90 N·m) - 9 in-lb (1.02 N·m).

(d) Put together the cover [15] and EMI gasket [28].

1) If disconnected, connect the bonding jumper [32] to the cover/EMI gasket assembly with the flat washer [29], lock washer [30], and nut [31].

a) Tighten the nut [31] to 8 in-lb (0.90 N·m) - 9 in-lb (1.02 N·m).

(e) Install the gasket [20] on the connector [18].

(f) Put the connector [18] into the opening in the housing/screen assembly [11].

(g) Install the slide-lock-post [16] and washer [17] to attach the connector [18] to the housing/screen assembly [11].

NOTE: The slide-lock-post can include one hex nut, one lock washer, one flat washer, and one slide-lock-post.

1) Make sure that the gasket [20] is between the connector [18] and the inner side of the housing/screen assembly [11].

(h) Install the slide-lock-post [16], washer [17], and bonding jumper [19] to attach the connector [18] to the housing/screen assembly [11].

NOTE: The slide-lock-post can include one washer, one hex nut, and one slide-lock-post.

(i) Tighten the slide-lock-posts [16] to 5 in-lb (0.56 N·m) - 6 in-lb (0.68 N·m).

(j) Install the screws [13] and washer [14] to attach the cover/EMI gasket assembly to the housing/screen assembly [11].

1) Tighten the screws [13] to the 5 in-lb (0.56 N·m) - 6 in-lb (0.68 N·m).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH KIDDE PHOTOELECTRIC DETECTORS (Continued)

SUBTASK 26-14-01-400-001

(2) Do this task: Lavatory Smoke Detector Installation (Kidde), TASK 26-14-01-400-802.

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LAVATORY (EXAMPLE)

LAVATORY SMOKE DETECTOR (EXAMPLE)

A

1921113 S0000360283_V4

Lavatory Smoke Detector Cleaning
Figure 702/26-14-01-990-805 (Sheet 1 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

3034436 S0000804543_V2

Lavatory Smoke Detector Cleaning
Figure 702/26-14-01-990-805 (Sheet 2 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

COVER/EMI GASKET ASSEMBLY

D

3046820 S0000813271_V1

Lavatory Smoke Detector Cleaning
Figure 702/26-14-01-990-805 (Sheet 3 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU FIRE DETECTION - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

(1) Deactivation of the Auxiliary Power Unit (APU) fire detection

(2) Activation of the APU fire detection.

TASK 26-15-00-040-801

2. APU Fire Detection - Deactivation

(Figure 201)

A. General

(1) This task will deactivate the Auxiliary Power Unit (APU) fire detection system.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. APU Fire Detection Deactivation

SUBTASK 26-15-00-020-005

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

D. APU Fire Detection Tryout

NOTE: This tryout is to make sure that the APU fire detection system is in a zero energy state.

SUBTASK 26-15-00-210-001

(1) Move and hold the TEST switch, on the P8-1 fire control panel, to the OVHT/FIRE position.

(a) Make sure that none of these lights, on the P8-1 fire control panel, come on:

1) APU fire switch light.

(b) Make sure that none of these lights, on the P7 pilots glareshield, come on:

1) The Captain's and First Officer's MASTER CAUTION lights.

2) The Captain's and First Officer's FIRE WARN lights.

3) The OVHT/DET light.

(c) Make sure that the flight compartment fire bell in the Aural Warning Module, M315, does not come on.

(d) Make sure that these conditions occur in the right main wheel well:

1) The APU remote fire light, on the P28 panel, does not come on.

2) The APU fire warning horn does not come on.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-15-00-210-002

(2) Release the TEST switch on the P8-1 fire control panel.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CAPTAIN'S FIRE WARNING SWITCH (P7)
(FIRST OFFICER'S IS OPPOSITE)

A

CAPTAIN'S WARNING LIGHTS (P7)

B

FIRE CONTROL PANEL (P8-1)

C

G21988 S0006568129_V2

APU Fire Detection System
Figure 201/26-15-00-990-805 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU Fire Detection System
Figure 201/26-15-00-990-805 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-15-00-440-801

3. APU Fire Detection - Activation

(Figure 201)

A. General

(1) This task will activate the Auxiliary Power Unit (APU) fire detection system.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. APU Fire Detection Activation

SUBTASK 26-15-00-420-005

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU FIRE DETECTION - ADJUSTMENT/TEST

1. **General**
   A. This procedure contains scheduled maintenance task data.
   B. This procedure consists of these tasks:
      (1) APU Fire Detection - Operational Test.
      (2) APU Fire Detection Loop Resistance - System Test.
      (3) APU Fire Detection Circuit - System Test.

TASK 26-15-00-710-801

2. **APU Fire Detection - Operational Test**
(Figure 501)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) The Operational Test does a check of the APU Fire Detection System without disturbing the detection system and it only uses the equipment that is on the airplane. This test will verify the circuit from the Engine and APU Fire Detection Control Module, M279 to the Fire Control Panel, P8-1, and to the APU Remote Panel, P28. The test will verify that the Engine and APU Fire Detection Control Module, which continuously monitors the detection loops, operates correctly.

NOTE: The FIRE WARN lights and the ALARM BELL are not activated if the APU fire detection system is inoperative. Only if the engines and APU are functioning properly will the FIRE WARN lights and ALARM BELL be activated. The circuit design precludes latent failure modes due to the parallel path of the test circuit and the actuation circuit.

NOTE: If AC power is removed (no power on main buses) and if there is a faulty APU LOOP, the FIRE BELL, the FIRE WARNING light, the MASTER CAUTION and the OVHT/DET lights are not activated.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)

C. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Operational Test

SUBTASK 26-15-00-860-001

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-15-00-860-002

(2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-15-00-860-003

(3) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

E. Do the FIRE/OVHT Test

SUBTASK 26-15-00-710-001

(1) Move and hold the TEST switch on the Fire Control Panel, P8-1, to the OVHT/FIRE position.

NOTE: When performing the Fire/OVHT Test with a faulted APU fire detector loop, the MASTER CAUTION lights are off, the FIRE WARN and OVHT/DET lights are off, the Fire Bell does not sound and the APU DET INOP light will be on.

NOTE: Ignore the indication lights for the engine and wheel well detection system and the indications on the Engine and APU Fire Detection Control Module, M279, in the Electronic Equipment Bay.

(a) On the Fire Control Panel, make sure these lights come on:

1) APU Fire Switch light (Red).

(b) On the Pilot's Glareshield, P7, make sure these lights come on:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
2) The Captain's and First Officer's FIRE WARN lights (Red).
3) The OVHT/DET light (Amber).

(c) Make sure the flight compartment fire bell in the Aural Warning Module, M315, comes on.

(d) In the right main wheel well, make sure these conditions occur:

1) The APU remote fire light (red), on the P28 panel, flashes on and off continuously.
2) The APU fire warning horn comes on.

SUBTASK 26-15-00-710-002

(2) Release the TEST switch on the Engine and APU Fire Control Panel.

(a) On the Engine and APU Fire Control Panel, make sure these lights go off:

1) APU Fire Switch light (Red).

(b) On the Pilot's Glareshield, make sure these lights go off:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
2) The Captain's and First Officer's FIRE WARN lights (Red).
3) The OVHT/DET light (Amber).

(c) Make sure the flight compartment fire bell in the Aural Warning Module, M315, stops.

(d) In the right main wheel well, make sure these conditions occur:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1) The APU remote fire light (red), on the P28 panel, goes off.
2) The APU fire warning horn stops.

F. Do the FAULT/INOP Test from the Engine and APU Fire Control Panel, P8-1

SUBTASK 26-15-00-710-003

(1) Move and hold the TEST switch on the Engine and APU Fire Control Panel to the FAULT/INOP position.

NOTE: Ignore the indication lights for the engine detection system and the indications on the Engine and APU Fire Detection Control Module, M279, in the Electronic Equipment Bay.

(a) On the Engine and APU Fire Control Panel, make sure these lights come on:

1) APU DET INOP light (Amber).

NOTE: When performing the FAULT/INOP Test with a faulted APU detector loop, the APU DET INOP light will stay on, the MASTER CAUTION lights are off and the FAULT light will come on during the test.

2) FAULT light (Amber)

(b) On the Pilot's Glareshield, P7, make sure these lights come on:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
2) The OVHT/DET light (Amber).

SUBTASK 26-15-00-710-004

(2) Release the TEST switch on the Engine and APU Fire Control Panel.

(a) On the Engine and APU Fire Control Panel, make sure these lights are off:

1) APU DET INOP light (Amber).
2) FAULT light (Amber)

(b) On the Pilot's Glareshield, P7, make sure these lights are off:

1) The Captain's and First Officer's MASTER CAUTION lights (Amber).
2) The OVHT/DET light (Amber).

G. Do the FAULT/INOP Test from the Engine and APU Fire Detection Control Module, M279.

SUBTASK 26-15-00-710-005

(1) Push and hold the FAULT/INOP TEST switch on the Engine and APU Fire Detection Control Module, in the Electrical and Electronics Compartment.

NOTE: Ignore the indications for the engine detection system and the indications that will occur in the flight compartment on the Engine and APU Fire Control Panel, P8-1, and the Pilot's Glareshield, P7.

(a) On the Engine and APU Fire Detection Control Module, make sure these lights come on:

1) APU (Amber).
2) The three FAULT CODE lights are ON-ON-ON.

SUBTASK 26-15-00-710-006

(2) Release the FAULT/INOP TEST switch on the Engine and APU Fire Detection Control Module.

(a) On the Engine and APU Fire Detection Control Module, make sure these lights are off:

1) APU (Amber).
2) The three FAULT CODE lights are OFF-OFF-OFF.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

H. Put the Airplane Back to its Usual Condition

SUBTASK 26-15-00-860-004

(1) Close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

SUBTASK 26-15-00-860-018

(2) If electrical power is not necessary, do this task: Remove Electrical Power, TASK 24-22-00-860-812.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CAPTAIN'S FIRE WARNING SWITCH (P7)
(FIRST OFFICER'S IS OPPOSITE)

A

CAPTAIN'S WARNING LIGHTS (P7)

B

FIRE CONTROL PANEL (P8-1)

C

G21988 S0006568129_V2

Auxiliary Power Unit (APU) Fire Detection Operational Test
Figure 501/26-15-00-990-801 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Auxiliary Power Unit (APU) Fire Detection Operational Test
Figure 501/26-15-00-990-801 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-15-00-730-801

3. APU Fire Detection Loop Resistance - System Test
(Figure 502)

A. General

(1) The Loop Resistance Test does a check of the APU Fire Detection Loop Circuit. It disturbs the engine fire detection system by removing the Engine and APU Fire Detection Control Module, M279 and it requires some additional test equipment.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
26-10-01-000-801	Engine and APU Fire Detection Module Removal (P/B 401)
26-10-01-400-801	Engine and APU Fire Detection Module Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

F. Prepare for the Loop Resistance Test

SUBTASK 26-15-00-860-005

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-15-00-860-006

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-15-00-010-001

(3) Get access to the Electronic Equipment Bay, do this task.

Open this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

G. APU Fire Detection Loop Resistance Test

SUBTASK 26-15-00-020-001

(1) Do this task: Engine and APU Fire Detection Module Removal, TASK 26-10-01-000-801.

SUBTASK 26-15-00-730-001

(2) Use a digital/analog multimeter, COM-1793 to measure the resistance across pin 25 of connector D1000 and airplane ground.

(a) Make sure the resistance is 1009 ±45 ohms.

SUBTASK 26-15-00-420-001

(3) Do this task: Engine and APU Fire Detection Module Installation, TASK 26-10-01-400-801.

SUBTASK 26-15-00-860-007

(4) Close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

SUBTASK 26-15-00-710-007

(5) Make sure the APU FAULT AREA light on the Engine and APU Fire Detection Control Module, P279, is not on.

SUBTASK 26-15-00-710-008

(6) Make sure the APU DET INOP light on the Engine and APU Fire Control Panel, P8-1, is not on.

SUBTASK 26-15-00-710-009

(7) Push the Captain's or First Officer's MASTER CAUTION light, on the Pilot's Glareshield, P7.

SUBTASK 26-15-00-710-010

(8) Make sure the Captain's and First Officer's MASTER CAUTION light, on the Pilot's Glareshield is not on.

SUBTASK 26-15-00-710-011

(9) Make sure the OVHT/DET light, on the Pilot's Glareshield is not on.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

H. Put the Airplane Back to its Usual Condition

SUBTASK 26-15-00-410-001

(1) Close this access panel:

Number	Name/Location
117A	Electronic Equipment Access Door

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FIRE DETECTION CONTROL UNIT

A

G21976 S0006568132_V2

Auxiliary Power Unit (APU) Fire Detection Resistance Test
Figure 502/26-15-00-990-802

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-15-00-730-802

4. APU Fire Detection Circuit - System Test

(Figure 501, Figure 503)

A. General

(1) The Circuit Test does a check of the entire APU Fire Detection System. It does not disturb the APU fire detection system but it does require additional test equipment.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
49-11-00-860-802	APU Usual Shutdown (P/B 201)
49-61-12-000-801	Electronic Control Unit Removal (P/B 401)
49-61-12-400-801	Electronic Control Unit Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536
SPL-1655	Test Equipment - APU/Engine Fire Detection System Part #: C26005-1 Supplier: 81205

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
315	APU Compartment - Left
316	APU Compartment - Right

ECCN 9E991 BOEING PROPRIETARY - See title page for details

E. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door
315A	APU Cowl Door

F. Prepare for the Circuit Test

SUBTASK 26-15-00-860-008

(1) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

SUBTASK 26-15-00-860-009

(2) Do this task to make sure the APU is not running: APU Usual Shutdown, TASK 49-11-00-860-802.

SUBTASK 26-15-00-860-017

(3) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-15-00-010-002

(4) Open these access panels:

Number	Name/Location
117A	Electronic Equipment Access Door
315A	APU Cowl Door

SUBTASK 26-15-00-480-001

(5) Connect the test box equipment, SPL-1655, to the terminal lug of the APU LOWER Fire Detector, M1756, and airplane ground.

(a) Make sure all the toggle switches on the test box are in the NORMAL positions.

(b) Connect one alligator clip to the responder bracket or to a grounding lug.

(c) Connect the other alligator clip to the responder lug.

G. Do a Test of the Fault Indication Circuit

SUBTASK 26-15-00-730-002

(1) On the test box, move the APU LOOP GND FAULT switch to the GND FAULT position.

(a) Make sure the APU DET INOP light on the Fire Control Panel, P8-1, comes on.

(b) On the Engine and APU Fire Detection Control Module, M279, make sure these conditions occur:

1) The APU LOOP FAULT AREA light comes on.

2) The three FAULT CODE lights are OFF-ON-OFF.

SUBTASK 26-15-00-730-003

(2) On the test box, move the APU LOOP GND FAULT switches to the NORMAL position.

(a) Make sure the APU DET INOP light on the Fire Control Panel, P8-1, goes off.

(b) On the Engine and APU Fire Detection Control Module, M279, make sure these conditions occur:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1) The APU LOOP FAULT AREA light goes off.
2) The three FAULT CODE lights are OFF-OFF-OFF.

H. Do a Test of the Fire Indication Circuit

SUBTASK 26-15-00-860-011

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-00-020-002

(2) Do this task: Electronic Control Unit Removal, TASK 49-61-12-000-801 (Figure 504).

SUBTASK 26-15-00-730-004

(3) On the test box, move the APU LOOP FIRE switches to the FIRE position.
   (a) Make sure the "APU" Fire Switch light, on the Fire Control Panel, P8-1, comes on.
   (b) On the Pilot's Glareshield, P7, make sure these conditions occur:
      1) The Captain and First Officer's FIRE WARN lights comes on.
   (c) Make sure the flight compartment fire bell, on the Warning Module, M315, comes on.
   (d) In the right main wheel well, make sure these conditions occur:
      1) The APU remote fire light (red), on the P28 panel, flashes on and off continuously.
      2) The APU fire warning horn comes on.
   (e) Use a digital/analog multimeter, COM-1793, to measure the voltage across pin B2 of connector D3599B and airplane ground.

      NOTE: Connector D3599B is where the APU Electronic Control Unit M1709 was installed.

      1) Make sure the voltage is at least 22 VDC.

SUBTASK 26-15-00-730-005

(4) On the test box, move the APU LOOP FIRE switches to the NORMAL position.
   (a) Make sure the "APU" Fire Switch light, on the Engine and APU Fire Control Panel, P8-1, goes off.
   (b) On the Pilot's Glareshield, P7, make sure these conditions occur:
      1) The Captain and First Officer's FIRE WARN lights goes off.
   (c) Make sure the flight compartment fire bell, on the Warning Module, M315, stops.
   (d) Make sure the APU remote fire light (red), on the P28 panel in the right main wheel well, goes off.
   (e) In the right main wheel well, make sure these conditions occur:
      1) The APU remote fire light (red), on the P28 panel, goes off.
      2) The APU fire warning horn stops.
   (f) Use a digital/analog multimeter, COM-1793, to measure the voltage across pin B2 of connector D3599B and airplane ground.

      NOTE: Connector D3599B is where the APU Electronic Control Unit M1709 was installed.

      1) Make sure the voltage is 0 ±2 VDC.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-15-00-480-002

(5) Disconnect the equipment, SPL-1655, from the terminal lug of the APU LOWER Fire Detector, M1756, and airplane ground.

I. Put the Airplane Back to its Usual Condition

SUBTASK 26-15-00-420-002

(1) Do this task: Electronic Control Unit Installation, TASK 49-61-12-400-801.

SUBTASK 26-15-00-860-012

(2) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-00-410-002

(3) Close these access panels:

Number	Name/Location
117A	Electronic Equipment Access Door
315A	APU Cowl Door

——— **END OF TASK** ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G21981 S0006568134_V2

Auxiliary Power Unit (APU) Fire Detection Circuit Test
Figure 503/26-15-00-990-803 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

B

G21984 S0006568135_V2

Auxiliary Power Unit (APU) Fire Detection Circuit Test
Figure 503/26-15-00-990-803 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

AFT CARGO COMPARTMENT

A

G42473 S0006568136_V2

Electronic Control Unit Test
Figure 504/26-15-00-990-804

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU OVERHEAT DETECTORS - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the Auxiliary Power Unit (APU) overheat detector elements.

(2) An installation of the APU overheat detector elements.

(3) A removal of the APU overheat detector assemblies.

(4) An installation of the APU overheat detector assemblies.

B. There are three overheat detectors in the APU compartment. One overheat detector is installed on the APU door. The second is installed on the upper firewall panel in the APU compartment. The third detector is installed above the APU exhaust duct. The overheat detectors are single loop detectors.

TASK 26-15-01-000-801

2. APU Overheat Detector Element Removal

(Figure 401)

A. General

(1) This task gives instructions to remove the Auxiliary Power Unit (APU) overheat detector element.

B. References

Reference	Title
27-31-00-000-801	Elevator and Tab Control System - Deactivation (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right
315	APU Compartment - Left
316	APU Compartment - Right
317	Tail Cone Compartment - Left
318	Tail Cone Compartment - Right

D. Access Panels

Number	Name/Location
315A	APU Cowl Door
318BR	Tailcone Access Door

E. Prepare for the Removal

SUBTASK 26-15-01-040-001

WARNING

MAKE SURE THAT YOU STAY AWAY FROM ELEVATOR PARTS THAT MOVE. INTERNAL ELEMENTS FROM THE ELEVATOR SYSTEM CAN MOVE SUDDENLY IF THE AIRCRAFT IS OPEN TO WIND. DAMAGE TO EQUIPMENT AND INJURY TO PERSONNEL CAN OCCUR.

(1) If required, deactivate the Elevator Tab Control System before removal, do this task: Elevator and Tab Control System - Deactivation, TASK 27-31-00-000-801.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-15-01-840-001

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-01-010-025

(3) To access the upper or lower APU detector, open this access panel:

Number	Name/Location
315A	APU Cowl Door

SUBTASK 26-15-01-010-026

(4) To access the APU tailpipe overheat detector, open this access panel:

Number	Name/Location
318BR	Tailcone Access Door

F. APU Overheat Detector Element Removal

SUBTASK 26-15-01-000-001

(1) Do these steps to remove the detector element [7] from the detector housing.

(a) Loosen the screw [10] on each clamp [9].

(b) Remove the nut [5] and washer [4] from the terminal lug.

(c) Disconnect the lead from the terminal lug.

I (d) Remove the four screws [2], washers [16], and nuts [17] from the overheat detector housing.

(e) Remove the element [7] from the clamp [9].

(f) Remove the grommets [8] from the element [7] to use on the new element.

(g) Remove the element [7].

——— **END OF TASK** ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Auxiliary Power Unit (APU) Overheat Detector Installation
Figure 401/26-15-01-990-801 (Sheet 1 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F47738 S0006568141_V2

Auxiliary Power Unit (APU) Overheat Detector Installation
Figure 401/26-15-01-990-801 (Sheet 2 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

VIEW THROUGH THE TAILCONE ACCESS DOOR, 318BR

C

G24780 S0006568142_V3

Auxiliary Power Unit (APU) Overheat Detector Installation
Figure 401/26-15-01-990-801 (Sheet 3 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Auxiliary Power Unit (APU) Overheat Detector Installation
Figure 401/26-15-01-990-801 (Sheet 4 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-15-01-400-801

3. APU Overheat Detector Element Installation

(Figure 401)

A. General

(1) This task gives instructions to install the Auxiliary Power Unit (APU) overheat detector element.

B. References

Reference	Title
26-15-00-710-801	APU Fire Detection - Operational Test (P/B 501)
27-31-00-400-801	Elevator and Tab Control System - Activation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

D. Consumable Materials

Reference	Description	Specification
A50154	Silcoset 152 - cold cure, white, silicone compound	
B00083	Solvent - VM&P Naphthas	TT-N-95 Type II, ASTM D-3735 Type III
D00004	Compound - Antiseize, Graphite-Petrolatum	SAE AMS 2518

E. Location Zones

Zone	Area
212	Flight Compartment - Right
315	APU Compartment - Left
316	APU Compartment - Right
317	Tail Cone Compartment - Left
318	Tail Cone Compartment - Right

F. Access Panels

Number	Name/Location
315A	APU Cowl Door
318BR	Tailcone Access Door

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G. Prepare for the Installation

SUBTASK 26-15-01-840-002

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-01-010-027

(2) To access the upper or lower APU detector, open this access panel:

Number	Name/Location
315A	APU Cowl Door

SUBTASK 26-15-01-010-028

(3) To access the APU tailpipe overheat detector, open this access panel:

Number	Name/Location
318BR	Tailcone Access Door

H. APU Overheat Detector Element Installation

SUBTASK 26-15-01-420-001

WARNING MAKE SURE THAT YOU STAY AWAY FROM ELEVATOR PARTS THAT MOVE. INTERNAL ELEMENTS FROM THE ELEVATOR SYSTEM CAN MOVE SUDDENLY IF THE AIRCRAFT IS OPEN TO WIND. DAMAGE TO EQUIPMENT AND INJURY TO PERSONNEL CAN OCCUR.

(1) Do these steps to install an overheat detector element [7]:

(a) Make sure that the detector housing and mounting bracket are clean.

(b) Put the overheat detector element [7] in position along the support tube [6].

(c) Put the overheat detector housing in the correct position on the mounting bracket.

(d) Install the screws [2], washers [16], and nuts [17] that attach the overheat detector housing to the mounting bracket.

1) Tighten the nuts [17] to 25 in-lb (2.8 N·m) to 30 in-lb (3.4 N·m).

(e) Install the grommets [8] on the detector element [7] at each clamp [9] location.

(f) Install the element [7] in the clamp [9].

(g) Make sure that the end of the detector element [7] ends less than 1 in. (25 mm) past the last grommet [8].

1) If the detector element [7] extends more than 1 in. (25 mm), adjust the length of the element between each clamp [9] so that any slack is evenly distributed.

(h) Make sure that there is at least 0.12 in. (3.0 mm) between the overheat detector element [7] and support tube [6].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

> **CAUTION**
> FOR THE LAST ASSEMBLY, USE LUBRICATED SCREWS. IF SCREWS ARE REUSED, OR IF NON-LUBRICATED SCREWS ARE USED THEY CAN FREEZE BECAUSE OF HIGH TEMPERATURES. THE THREADS ON THESE SCREWS MUST HAVE A LAYER OF COMPOUND, D00004, BEFORE INSTALLATION.

(i) Apply compound, D00004, to the screw [10] threads.

(j) Tighten the screw [10] on each clamp [9] until 1-1/2 to 3 threads extend through the nut.

1) Make sure that the grommets [8] and clamp [9] are tight.

2) Make sure that the ends of the screws [10] do not touch the support tube [6].

(k) Apply compound, D00004, to the threads of the terminal lug.

(l) Put the lead in position on the terminal lug, and attach with a washer [4] and nut [5].

(m) Tighten the nut [5] to 32.0 in-lb (3.6 N·m) to 38.0 in-lb (4.3 N·m).

(n) Apply Silcoset 152 adhesive, A50154, to the terminal lugs.

SUBTASK 26-15-01-280-001

(2) Do a check of the resistance between the element stud and the airplane structure.

(a) Use an intrinsically safe approved bonding meter, COM-1550, or equivalent, that can measure 0.0001 ohm (0.1 milliohm).

(b) Make sure that the resistance is less than 0.0025 ohm (2.5 milliohms).

(c) If the resistance is more than 0.0025 ohm (2.5 milliohms), clean the bonding surfaces with the solvent, B00083, and do the check again.

I. APU Overheat Detector Assembly Installation Test

SUBTASK 26-15-01-840-003

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-01-710-001

(2) Do this task: APU Fire Detection - Operational Test, TASK 26-15-00-710-801.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 26-15-01-010-007

(1) Close this access panel:

Number	Name/Location
318BR	Tailcone Access Door

SUBTASK 26-15-01-010-009

(2) Close this access panel:

Number	Name/Location
315A	APU Cowl Door

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-15-01-440-001

(3) If required, activate the Elevator Tab Control System, do this task: Elevator and Tab Control System - Activation, TASK 27-31-00-400-801.

——— END OF TASK ———

TASK 26-15-01-000-802

4. APU Overheat Detector Assembly Removal

(Figure 401)

A. General

(1) This task gives instructions to remove the APU Overheat Detector Assembly.

B. References

Reference	Title
27-31-00-000-801	Elevator and Tab Control System - Deactivation (P/B 201)

C. Location Zones

Zone	Area
212	Flight Compartment - Right
315	APU Compartment - Left
316	APU Compartment - Right
317	Tail Cone Compartment - Left
318	Tail Cone Compartment - Right

D. Access Panels

Number	Name/Location
315A	APU Cowl Door
318BR	Tailcone Access Door

E. Prepare for the Removal

SUBTASK 26-15-01-040-002

WARNING MAKE SURE THAT YOU STAY AWAY FROM ELEVATOR PARTS THAT MOVE. INTERNAL ELEMENTS FROM THE ELEVATOR SYSTEM CAN MOVE SUDDENLY IF THE AIRCRAFT IS OPEN TO WIND. DAMAGE TO EQUIPMENT AND INJURY TO PERSONNEL CAN OCCUR.

(1) If required, deactivate the Elevator Tab Control System, do this task: Elevator and Tab Control System - Deactivation, TASK 27-31-00-000-801.

SUBTASK 26-15-01-840-004

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-15-01-010-029

(3) To access the upper or lower APU detector, open this access panel:

Number	Name/Location
315A	APU Cowl Door

SUBTASK 26-15-01-010-030

(4) To access the APU tailpipe overheat detector, open this access panel:

Number	Name/Location
318BR	Tailcone Access Door

F. APU Overheat Detector Assembly Removal

SUBTASK 26-15-01-000-002

(1) Do these steps to remove the detector assembly [1] from the APU compartment.

(a) Remove the nut [5] and washer [4] from the terminal lug.

(b) Disconnect the lead from the terminal lug.

(c) Remove the bolts [3] from the overheat detector housing.

LOM ALL; AIRPLANES WITH UPPER AND LOWER OVERHEAT DETECTORS

(d) Remove the bolts [11] and washers [12] that attach each clamp [13] to the APU compartment.

1) Remove the clamp [13] from the support tube [6].

LOM ALL; AIRPLANES WITH TAILPIPE OVERHEAT DETECTOR

(e) Remove the bolts [11] and washer [12] that attach each clamp [15] and clamp [14] to the APU compartment.

LOM ALL

(f) Remove the detector assembly [1] from the APU compartment.

END OF TASK

TASK 26-15-01-400-802

5. APU Overheat Detector Assembly Installation

(Figure 401)

A. General

(1) This task gives instructions to install the APU Overheat Detector Assembly.

B. References

Reference	Title
26-15-00-710-801	APU Fire Detection - Operational Test (P/B 501)
27-31-00-400-801	Elevator and Tab Control System - Activation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

D. Consumable Materials

Reference	Description	Specification
A50154	Silcoset 152 - cold cure, white, silicone compound	
B00083	Solvent - VM&P Naphthas	TT-N-95 Type II, ASTM D-3735 Type III

E. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
315	APU Compartment - Left
316	APU Compartment - Right
317	Tail Cone Compartment - Left
318	Tail Cone Compartment - Right

F. Access Panels

Number	Name/Location
315A	APU Cowl Door
318BR	Tailcone Access Door

G. Prepare for Installation

SUBTASK 26-15-01-840-005

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-01-010-031

(2) To access the upper or lower APU detector, open this access panel:

Number	Name/Location
315A	APU Cowl Door

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-15-01-010-032

(3) To access the APU tailpipe overheat detector, open this access panel:

Number	Name/Location
318BR	Tailcone Access Door

H. APU Overheat Detector Assembly Installation

SUBTASK 26-15-01-420-002

> **WARNING** MAKE SURE THAT YOU STAY AWAY FROM ELEVATOR PARTS THAT MOVE. INTERNAL ELEMENTS FROM THE ELEVATOR SYSTEM CAN MOVE SUDDENLY IF THE AIRCRAFT IS OPEN TO WIND. DAMAGE TO EQUIPMENT AND INJURY TO PERSONNEL CAN OCCUR.

(1) Do these steps to install a overheat detector assembly [1]:

LOM ALL; AIRPLANES WITH UPPER AND LOWER OVERHEAT DETECTORS

(a) Put the detector assembly in position in the APU compartment, and install the clamps [13].

1) Attach each clamp [13] with two bolts [11] and washers [12].

2) Tighten the bolts [11] to 32.0 in-lb (3.6 N·m) to 38.0 in-lb (4.3 N·m).

LOM ALL; AIRPLANES WITH TAILPIPE OVERHEAT DETECTOR

(b) Put the detector assembly in position in the APU compartment.

1) Put the clamp [14] and clamp [15] in position and attach with the bolt [11] and washer [12].

2) Tighten the bolts to 32.0 in-lb (3.6 N·m) to 38.0 in-lb (4.3 N·m).

LOM ALL

(c) Install the two bolts [3] that attach the overheat detector housing to the APU compartment.

(d) Tighten the bolts to 72.0 in-lb (8 N·m) to 88 in-lb (10 N·m).

(e) Put the lead in position on the terminal lug, and attach with a washer [4] and nut [5].

(f) Tighten the nut [5] to 32.0 in-lb (3.6 N·m) to 38.0 in-lb (4.3 N·m).

(g) Apply Silcoset 152 adhesive, A50154 sealant to the terminal lugs.

SUBTASK 26-15-01-280-002

(2) Do a check of the resistance between the stud and the airplane structure.

(a) Use an intrinsically safe approved bonding meter, COM-1550, or equivalent, which can measure 0.0001 ohm (0.1 milliohm).

(b) Make sure the resistance is less than 0.0025 ohm (2.5 milliohms).

(c) If the resistance is more than 0.0025 ohm (2.5 milliohms), clean the bonding surfaces with the solvent, B00083, and do the check again.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

I. APU Overheat Detector Assembly Installation Test

SUBTASK 26-15-01-840-006

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-15-01-710-002

(2) Do this task: APU Fire Detection - Operational Test, TASK 26-15-00-710-801.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 26-15-01-010-016

(1) Close this access panel:

Number	Name/Location
315A	APU Cowl Door

SUBTASK 26-15-01-010-018

(2) Close this access panel:

Number	Name/Location
318BR	Tailcone Access Door

SUBTASK 26-15-01-440-002

(3) If required, activate the Elevator Tab Control System, do this task:Elevator and Tab Control System - Activation, TASK 27-31-00-400-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU FIRE DETECTORS - INSPECTION/CHECK

1. General

A. This procedure has this inspection task:

(1) APU Fire Detectors.

TASK 26-15-01-210-801

2. APU Fire Detectors Inspection

A. Location Zones

Zone	Area
315	APU Compartment - Left
316	APU Compartment - Right
317	Tail Cone Compartment - Left
318	Tail Cone Compartment - Right

B. Access Panels

Number	Name/Location
315A	APU Cowl Door
318BR	Tailcone Access Door

C. Procedure

SUBTASK 26-15-01-010-019

(1) To access the upper or lower APU detector, open this access panel:

Number	Name/Location
315A	APU Cowl Door

SUBTASK 26-15-01-010-021

(2) To access the APU tailpipe overheat detector, open this access panel:

Number	Name/Location
318BR	Tailcone Access Door

SUBTASK 26-15-01-210-001

(3) Do a general visual inspection of the APU fire detectors.

D. Put the Airplane Back to Its Usual Condition

SUBTASK 26-15-01-010-022

(1) Close this access panel:

Number	Name/Location
318BR	Tailcone Access Door

SUBTASK 26-15-01-010-024

(2) Close this access panel:

Number	Name/Location
315A	APU Cowl Door

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU FIRE WARNING HORN - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) APU Fire Warning Horn Removal

(2) APU Fire Warning Horn Installation.

B. The APU Fire Warning Horn M277 is in the P28 APU Fire Control Panel.

TASK 26-15-02-000-801

2. APU Fire Warning Horn Removal

(Figure 401)

A. General

(1) This task gives instructions to remove the APU Fire Warning Horn.

B. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

C. Prepare for the Removal

SUBTASK 26-15-02-010-005

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU

D. APU Fire Warning Horn Removal

SUBTASK 26-15-02-020-004

(1) Remove screws [2] and washers [3] that connect the APU fire warning horn [1] to the P28 panel bracket.

SUBTASK 26-15-02-020-008

(2) Carefully move the APU fire warning horn [1] away from the P28 panel bracket to get sufficient access to disconnect the electrical wire terminals [4].

SUBTASK 26-15-02-020-001

(3) Tag each electrical wire with its location.

SUBTASK 26-15-02-020-002

(4) Loosen the electrical wire terminals [4].

SUBTASK 26-15-02-020-003

(5) Disconnect the electrical wire terminals [4] from the APU fire warning horn [1].

SUBTASK 26-15-02-020-005

(6) Remove the APU fire warning horn [1].

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

3066412 S0000827906_V1

APU Fire Warning Horn Installation
Figure 401/26-15-02-990-801 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU FIRE WARNING HORN

B

3066413 S0000827907_V1

APU Fire Warning Horn Installation
Figure 401/26-15-02-990-801 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-15-02-400-801

3. APU Fire Warning Horn Installation

(Figure 401)

A. General

(1) This task gives instructions to install the APU Fire Warning Horn.

B. References

Reference	Title
20-10-34-120-801	Hand Clean Metal Surfaces with Abrasives (P/B 701)
26-15-00-710-801	APU Fire Detection - Operational Test (P/B 501)
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
STD-765	Scraper - Plastic

D. Consumable Materials

Reference	Description	Specification
A50110	Sealant - Fuel Tank	BMS5-45 Class B-2
A50155	Sealant - Fuel Tank	BMS5-45 Class C
A50231	Sealant - Pressure And Environmental - Chromate Type	BMS5-95 Class B
A50296	Sealant - Pressure And Environmental - Chromate Type	BMS5-95 Class C

E. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

F. Prepare for the Installation

SUBTASK 26-15-02-010-004

(1) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU

G. APU Fire Warning Horn Installation

SUBTASK 26-15-02-020-007

(1) Remove any existing sealant with plastic scraper, STD-765.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-15-02-100-001

(2) Prepare the upper two screw hole mating surfaces between the P28 panel bracket and APU fire warning horn [1].

(a) Do this task: Hand Clean Metal Surfaces with Abrasives, TASK 20-10-34-120-801

SUBTASK 26-15-02-420-004

(3) Apply fay seal with sealant, A50110, or sealant, A50155, or sealant, A50231, or sealant, A50296, to the one of mating surfaces between the APU fire warning horn [1] and P28 panel bracket, where the two upper screws [2] are installed (SWPM 20-20-00).

SUBTASK 26-15-02-420-001

(4) Put the APU fire warning horn [1] in its position for installation.

SUBTASK 26-15-02-420-003

(5) Connect the electrical wire terminals [4] to the APU fire warning horn [1].

SUBTASK 26-15-02-020-006

(6) Remove the location tags from the electrical wire terminals [4].

SUBTASK 26-15-02-420-002

(7) Install the screws [2] and washers [3] that attach the APU fire warning horn [1] to the P28 panel bracket.

(a) Make sure that the sealant squeeze out is continuous and visible along edges of bonding surfaces.

SUBTASK 26-15-02-860-001

(8) Measure the electrical bonding resistance between the P28 panel bracket and APU fire warning horn [1] (SWPM 20-20-00).

(a) Use an intrinsically safe approved bonding meter, COM-1550.

(b) Make sure that the electrical bonding resistance is 0.50 milliohms (0.00050 ohms) or less.

SUBTASK 26-15-02-410-001

(9) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	23	C00403	FIRE PROTECTION DETECTION APU

H. APU Fire Warning Horn Installation Test

SUBTASK 26-15-02-480-001

(1) Do this task: APU Fire Detection - Operational Test, TASK 26-15-00-710-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO BAY SMOKE DETECTION - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

(1) Cargo bay smoke detection - deactivation.

(2) Cargo bay smoke detection - activation.

TASK 26-16-00-040-801

2. Cargo Bay Smoke Detection - Deactivation

A. General

(1) This task will deactivate the cargo bay smoke detection system.

B. Procedure

SUBTASK 26-16-00-020-001

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

C. Cargo Bay Smoke Detection - Tryout

NOTE: This tryout is to make sure that the cargo bay smoke detection system is in a zero energy state.

SUBTASK 26-16-00-210-001

(1) Push and hold the TEST switch on the Cargo Fire Control Panel.

(a) On the Cargo Fire Control Panel, make sure that none of these lights come on:

1) The FWD CARGO SMOKE light.

2) The AFT CARGO SMOKE light.

3) The DETECTOR FAULT light.

(b) On the Pilot's Glareshield, P7, make sure that none of these lights come on:

1) The Captain's and First Officer's FIRE WARN lights.

(c) Make sure the flight compartment fire bell does not come on.

SUBTASK 26-16-00-210-002

(2) Release the TEST switch.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

FIRE WARN LIGHT (P7) (EXAMPLE)

A

CARGO FIRE CONTROL PANEL (P8)

B

ENGINE AND APU FIRE CONTROL PANEL (P8-1)

C

H01807 S0006568153_V3

Cargo Bay Smoke Detection System
Figure 201/26-16-00-990-802

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-16-00-440-801

3. Cargo Bay Smoke Detection - Activation

(Figure 201)

A. General

(1) This task will activate the cargo bay smoke detection system.

B. Procedure

SUBTASK 26-16-00-420-001

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO BAY SMOKE DETECTION - ADJUSTMENT/TEST

1. General

A. Both cargo bays have smoke detectors installed in the ceiling. When the concentration of smoke at the sensor gets to a preset threshold, the smoke detector alarm occurs.

B. This procedure consists of these tasks:

(1) Cargo Bay Smoke Detection - Operational Test.

(2) Cargo Bay Smoke Detection - Smoke Test.

TASK 26-16-00-710-801

2. Cargo Bay Smoke Detection - Operational Test

(Figure 501)

A. Prepare for the Operational Test

SUBTASK 26-16-00-860-002

(1) Make sure that these circuit breakers are closed.

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

B. Cargo Bay Smoke Detection Operational Test

SUBTASK 26-16-00-860-017

(1) Make sure FWD and AFT DET SELECT switches on the Cargo Fire Control Panel are set to NORM.

SUBTASK 26-16-00-710-001

(2) Push and hold the TEST switch on the Cargo Fire Control Panel.

(a) On the Cargo Fire Control panel, look for these indications:

1) The ARM FWD and AFT red lights comes on.

2) The DISCH light comes on.

3) The EXT FWD and EXT AFT light comes on.

4) The DETECTOR FAULT light is off.

(b) On the Pilot's Glareshield, P7, make sure these lights come on:

1) The Captain's and First Officer's FIRE WARN lights (Red).

(c) Make sure you hear the flight compartment fire bell.

SUBTASK 26-16-00-710-003

(3) Push the Captain's or First Officer's FIRE WARN switch.

NOTE: If you push the either of the FIRE WARN lights on the P7 panel, or the BELL CUTOUT switch on the Engine and APU Fire Control panel, the same conditions will occur. The FIRE WARN and BELL CUTOUT switches cause the same resets but from different locations.

(a) On the Pilot's Glareshield, P7, make sure these lights go off:

1) The Captain's and First Officer's FIRE WARN lights (Red).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) Make sure you do not hear the fire bell.

SUBTASK 26-16-00-860-018

(4) Release the TEST switch.

(a) On the Cargo Bay Fire Control panel, make sure that these lights go off:

1) The ARM FWD and AFT red lights goes off.

2) The DISCH light goes off.

3) The EXT FWD and AFT lights go off.

SUBTASK 26-16-00-860-019

(5) Set the FWD and AFT DET SELECT switches to “A”.

SUBTASK 26-16-00-860-020

(6) Push and hold the TEST switch.

(a) On the Cargo Fire Control panel, look for these indications:

1) The ARM FWD and AFT red light comes on.

2) The DISCH light comes on.

3) The EXT FWD and EXT AFT light comes on.

4) The DETECTOR FAULT light is off.

(b) On the Pilot's Glareshield, P7, make sure these lights come on:

1) The Captain's and First Officer's FIRE WARN lights (Red).

(c) Make sure you hear the flight compartment fire bell.

SUBTASK 26-16-00-860-021

(7) Push the Captain's or First Officer's FIRE WARN switch.

NOTE: If you push the either of the FIRE WARN lights on the P7 panel, or the BELL CUTOUT switch on the Engine and APU Fire Control panel, the same conditions will occur. The FIRE WARN and BELL CUTOUT switches cause the same resets but from different locations.

(a) On the Pilot's Glareshield, P7, make sure these lights go off:

1) The Captain's and First Officer's FIRE WARN lights (Red).

(b) Make sure you do not hear the fire bell.

SUBTASK 26-16-00-860-022

(8) Release the TEST switch.

(a) On the Cargo Bay Fire Control panel, make sure these lights go off:

1) The ARM FWD and AFT red lights goes off.

2) The DISCH light goes off.

3) The EXT FWD and AFT lights go off.

SUBTASK 26-16-00-860-023

(9) Set the FWD and AFT DET SELECT switches to “B”.

SUBTASK 26-16-00-710-004

(10) Push and hold the TEST switch.

(a) On the Cargo Fire Control panel, look for these indications:

1) The ARM FWD and AFT red lights comes on.

2) The DISCH light comes on.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

3) The EXT FWD and EXT AFT light comes on.

4) The DETECTOR FAULT light is off.

(b) On the Pilot's Glareshield, P7, make sure these lights come on:

1) The Captain's and First Officer's FIRE WARN lights (Red).

(c) Make sure you hear the flight compartment fire bell.

SUBTASK 26-16-00-730-001

(11) Push the Captain's or First Officer's FIRE WARN switch.

NOTE: If you push the either of the FIRE WARN lights on the P7 panel, or the BELL CUTOUT switch on the Engine and APU Fire Control panel, the same conditions will occur. The FIRE WARN and BELL CUTOUT switches cause the same resets but from different locations.

(a) On the Pilot's Glareshield, P7, make sure these lights go off:

1) The Captain's and First Officer's FIRE WARN lights (Red).

(b) Make sure that you do not hear the fire bell.

SUBTASK 26-16-00-860-003

(12) Release the TEST switch.

(a) On the Cargo Bay Fire Control panel, look for this indication:

1) The ARM FWD and AFT red light goes off.

2) The DISCH light goes off.

3) The EXT FWD and EXT AFT light goes off.

SUBTASK 26-16-00-860-024

(13) Set the FWD and AFT DET SELECT switches to back to NORM.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

FIRE WARN LIGHT (P7) (EXAMPLE)

A

CARGO FIRE CONTROL PANEL (P8)

B

ENGINE AND APU FIRE CONTROL PANEL (P8-1)

C

H01807 S0006568153_V3

Cargo Bay Smoke Detection Test
Figure 501/26-16-00-990-801 (Sheet 1 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FORWARD CARGO COMPARTMENT

D

AFT CARGO COMPARTMENT
(EXAMPLE)

E

H01775 S0006568155_V2

Cargo Bay Smoke Detection Test
Figure 501/26-16-00-990-801 (Sheet 2 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

F

H01781 S0006568156_V3

Cargo Bay Smoke Detection Test
Figure 501/26-16-00-990-801 (Sheet 3 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-16-00-730-801

3. Cargo Bay Smoke Detection - Smoke Test
(Figure 501)

A. General

(1) When the DET SELECT switch is set to A, and any detector in loop A detects smoke, an alarm will occur. Similarly, when the DET SELECT switch is set to B, and the B loop detects smoke, the alarm will occur. When the DET SELECT switch is set to NORM, smoke must be detected by a detector in loop A and loop B (any detector in both loops, they do not have to be a pair) before the alarm will occur.

NOTE: If you apply too much smoke to a detector, the excess smoke could affect adjacent detectors. Try to limit the amount of smoke applied to each detector.

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-11202	Smoke Generator - Lavatory/Crew Rest Smoke Detector (or 737 Cargo Area Type Smoke Detectors) Part #: HO-25S Supplier: 61908 Part #: SOLOA10 Supplier: 1WU32 Opt Part #: SOLOA3 Supplier: 1WU32 Opt Part #: SOLOA4 Supplier: 1WU32

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Test

SUBTASK 26-16-00-860-005

(1) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

E. Smoke Test

SUBTASK 26-16-00-860-006

(1) On the Cargo Fire Control panel P8, set the DET SELECT FWD switch to A.

SUBTASK 26-16-00-860-007

(2) On the Cargo Fire Control pane P8, set the DET SELECT AFT switch to NORM.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-16-00-730-005

(3) Use a smoke generator, COM-11202, to make smoke adjacent to the forward left detector in the forward cargo bay.

SUBTASK 26-16-00-730-006

(4) Make sure that these indications occur:

(a) On the Cargo Bay Fire Control panel, the ARM FWD light (red) comes on.

(b) On the Pilot's Glareshield, P7, the Captain's and First Officer's FIRE WARN lights (red) come on.

(c) In the flight compartment, the fire bell comes on.

SUBTASK 26-16-00-730-003

(5) On the Cargo Fire Control panel, set the DET SELECT FWD and DET SELECT AFT switch to NORM.

(a) Make sure all the alarm indications stop.

SUBTASK 26-16-00-860-008

(6) Clear the smoke from the cargo bay.

NOTE: If the smoke is not cleared from the cargo bay within 60 seconds, the smoke indications will occur again.

SUBTASK 26-16-00-730-004

(7) Do the Smoke Test for each of the other cargo bay smoke detectors.

Table 501/26-16-00-993-801

FWD DET SWITCH POSITION	AFT DET SWITCH POSITION	CARGO BAY	LOCATION	EQUIPMENT NUMBER
A	NORM	FWD	FWD LEFT	M2238
A	NORM	FWD	AFT LEFT	M2239
B	NORM	FWD	FWD RIGHT	M2240
B	NORM	FWD	AFT RIGHT	M2241
NORM	A	AFT	FWD LEFT	M2242
NORM	A	AFT	MID LEFT	M2243
NORM	A	AFT	AFT RIGHT (ADJACENT TO M2247)	M2244
NORM	B	AFT	FWD RIGHT	M2245
NORM	B	AFT	MID RIGHT	M2246
NORM	B	AFT	AFT RIGHT (ADJACENT TO M2244)	M2247

F. Put the Airplane Back to Its Usual Condition

SUBTASK 26-16-00-860-009

(1) On the Cargo Fire Control panel, set the DET SELECT FWD and DET SELECT AFT switches to NORM.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO BAY SMOKE DETECTOR - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) Removal of the cargo bay smoke detector.

(2) Installation of the cargo bay smoke detector.

TASK 26-16-01-000-801

2. Cargo Bay Smoke Detector Removal

(Figure 401)

A. General

(1) This task gives instructions to remove the Cargo Bay Smoke Detector.

(2) The forward lower cargo compartment has four smoke detectors. The aft lower cargo compartment has six smoke detectors.

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
26-16-01-100-801	Cargo Bay Smoke Detector - Cleaning (P/B 701)

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

D. Prepare for the Removal

SUBTASK 26-16-01-860-003

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

E. Cargo Bay Smoke Detector Removal

SUBTASK 26-16-01-860-006

CAUTION

DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(1) Before the smoke detector [2] is touched, do the procedure for devices that are sensitive to electrostatic discharge, as follows:

- ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802

ECCN 9E991 BOEING PROPRIETARY - See title page for details

- ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 26-16-01-020-005

(2) For the forward cargo bay smoke detector, do these steps:

(a) Remove the screws [3] that hold the guard assembly [1] to the cargo ceiling.

(b) Remove the screws [5] that hold the smoke detector [2] to the detector pan.

LOM 404 PRE SB 737-26-1121

(c) Remove the smoke detector [2] from the detector pan.

LOM 402, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-999; LOM 404 POST SB 737-26-1121

(d) Remove the smoke detector [2] and gasket [6] from the detector pan.

LOM ALL

(e) Disconnect the electrical connector from the smoke detector [2].

SUBTASK 26-16-01-020-006

(3) For the aft cargo bay smoke detector, do these steps:

(a) Remove the screws [3] that hold the guard assembly [1] to the cargo ceiling.

(b) Remove the screws [5] that hold the smoke detector [2] to the detector pan.

(c) Remove the smoke detector [2] from the detector pan.

(d) Disconnect the electrical connector from the smoke detector [2].

SUBTASK 26-16-01-160-003

(4) If it is necessary, do this task: Cargo Bay Smoke Detector - Cleaning, TASK 26-16-01-100-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

H01569 S0006568162_V3

Cargo Bay Smoke Detector Installation
Figure 401/26-16-01-990-806 (Sheet 1 of 7)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

C

SMOKE DETECTOR

D

2850673 S0000667294_V2

Cargo Bay Smoke Detector Installation
Figure 401/26-16-01-990-806 (Sheet 2 of 7)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SMOKE DETECTOR

D

SMOKE DETECTOR

D

2850677 S0000667296_V2

Cargo Bay Smoke Detector Installation
Figure 401/26-16-01-990-806 (Sheet 3 of 7)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

C

SMOKE DETECTOR

D

2981491 S0000759738_V1

Cargo Bay Smoke Detector Installation
Figure 401/26-16-01-990-806 (Sheet 4 of 7)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SMOKE DETECTOR

D

SMOKE DETECTOR

D

2981490 S0000759739_V1

Cargo Bay Smoke Detector Installation
Figure 401/26-16-01-990-806 (Sheet 5 of 7)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

D

SMOKE DETECTOR

E

2981489 S0000759741_V1

Cargo Bay Smoke Detector Installation
Figure 401/26-16-01-990-806 (Sheet 6 of 7)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SMOKE DETECTOR

E

SMOKE DETECTOR

E

2981488 S0000759742_V1

Cargo Bay Smoke Detector Installation
Figure 401/26-16-01-990-806 (Sheet 7 of 7)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-16-01-400-801

3. Cargo Bay Smoke Detector Installation

(Figure 401)

A. General

(1) This task gives instructions to install the Cargo Bay Smoke Detector.

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
26-16-00-710-801	Cargo Bay Smoke Detection - Operational Test (P/B 501)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Smoke detector	26-16-01-05-210	LOM ALL
		26-16-01-05-211	LOM 454-999
		26-16-01-08-220	LOM ALL
6	Gasket	26-16-01-05-220	LOM 402, 404
		26-16-01-05-225	LOM 402, 404
		26-16-01-08-190	LOM 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-999

D. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

E. Prepare for the Installation

SUBTASK 26-16-01-860-004

(1) Make sure that these circuit breakers are open:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

F. Cargo Bay Smoke Detector Installation

SUBTASK 26-16-01-860-007

CAUTION

DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(1) Before the smoke detector [2] is touched, do the procedure for devices that are sensitive to electrostatic discharge, as follows:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

- ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
- ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 26-16-01-420-006

(2) For the forward cargo bay smoke detector, do these steps:

(a) Connect the electrical connector to the smoke detector [2].

LOM 404 PRE SB 737-26-1121

(b) Position the smoke detector [2] on the detector pan and secure it with the screws [5].

LOM 402, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-999; LOM 404 POST SB 737-26-1121

(c) Position the smoke detector [2] and gasket [6] on the detector pan and secure it with the screws [5].

LOM ALL

(d) Position the guard assembly [1] on the cargo ceiling and secure it with the screws [3].

SUBTASK 26-16-01-420-007

(3) For the aft cargo bay smoke detector, do these steps:

(a) Connect the electrical connector to the smoke detector [2].

(b) Position the smoke detector [2] on the detector pan and secure it with the screws [5].

(c) Position the guard assembly [1] on the cargo ceiling and secure it with the screws [3].

G. Cargo Bay Smoke Detector Installation Test

SUBTASK 26-16-01-860-005

(1) Close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-16-01-710-002

(2) Do this task: Cargo Bay Smoke Detection - Operational Test, TASK 26-16-00-710-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO BAY SMOKE DETECTOR - CLEANING/PAINTING

1. General

A. This procedure has a task that cleans the cargo bay smoke detectors.

B. Each cargo bay has smoke detectors installed in the ceiling. The cleaning procedure is the same for each smoke detector.

TASK 26-16-01-100-801

2. Cargo Bay Smoke Detector - Cleaning

(Figure 701)

A. References

Reference	Title
26-16-00-710-801	Cargo Bay Smoke Detection - Operational Test (P/B 501)

B. Tools/Equipment

Reference	Description
STD-123	Brush - Soft Bristle
STD-1086	Gloves - Rubber
STD-3939	Air Source - Regulated, Dry Filtered, 0 to 10 psig

C. Consumable Materials

Reference	Description	Specification
B00065	Alcohol - Denatured, Ethyl (Ethanol)	AMS 3002 (Supersedes O-A-396)
B50073	Alcohol - Isopropyl	ASTM D 770
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)

D. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

E. Cargo Bay Smoke Detector Cleaning

SUBTASK 26-16-01-860-001

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-16-01-160-001

WARNING

WHEN YOU CLEAN THE SMOKE DETECTOR AND SENSOR, MAKE SURE THAT THE AREA HAS SUFFICIENT AIRFLOW. KEEP THE ALCOHOL AWAY FROM HEAT, SPARKS OR FLAMES. DO NOT BREATHE THE FUMES FROM THE ALCOHOL. PUT ON RUBBER GLOVES. ALCOHOL IS A FLAMMABLE AND POISONOUS SOLVENT WHICH CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

WARNING

ISOPROPYL ALCOHOL IS AN AGENT THAT IS FLAMMABLE, EXPLOSIVE, AND POISONOUS. MAKE SURE ALL PERSONS OBEY ALL OF THE PRECAUTIONS WHEN ISOPROPYL ALCOHOL IS USED.

- GAS/AIR MIXTURES MORE THAN THE LOWER EXPLOSIVE LIMIT (LEL) CAN CAUSE AN EXPLOSION IF HIGH HEAT, SPARKS, OR FLAMES SUPPLY IGNITION.
- USE IN AN AREA OPEN TO THE AIR.
- CLOSE THE CONTAINER WHEN NOT USED.
- DO NOT GET ISOPROPYL ALCOHOL IN THE EYES, ON THE SKIN, OR ON YOUR CLOTHES.
- DO NOT BREATHE THE GAS.

(2) Put on rubber glove, STD-1086.

SUBTASK 26-16-01-160-002

(3) Remove the dirt from the exterior of the smoke detector with the cotton wiper, G00034, soaked with alcohol, B00065.

SUBTASK 26-16-01-210-001

CAUTION

BLOW THE AIR LIGHTLY INTO THE SENSOR ASSEMBLY. TOO MUCH FORCE CAN CAUSE STATIC ELECTRICITY ON THE ELECTRODES WHICH CAN CAUSE DAMAGE TO THE SMOKE SENSOR.

(4) Use a soft bristle brush, STD-123, and compressed nitrogen at a maximum pressure of 15 psig, or with the 0 to 10 psig air source, STD-3939, lightly blow any dirt or particles out of the sensor assembly.

NOTE: Scheduled cleaning is not necessary, but the smoke detector labyrinth must be kept clean to operate accurately.

(a) Clean the connector.

(b) Clean the dust screens.

(c) Clean the inner area of the labyrinth.

NOTE: Refer to the applicable CMM for the instructions. It is not necessary to fully disassemble the smoke detector to clean the inner area of the labyrinth.

(5) Clean the electrical connector pins with alcohol, B50073.

(6) Install the cover if removed.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-16-01-860-002

(7) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-16-01-710-003

(8) Do this task: Cargo Bay Smoke Detection - Operational Test, TASK 26-16-00-710-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SMOKE DETECTOR (WHITTAKER) (EXAMPLE)

SMOKE DETECTOR (FENWAL) (EXAMPLE)

2795754 S0000637145_V2

Cargo Bay Smoke Detector Cleaning
Figure 701/26-16-01-990-803 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SMOKE DETECTOR
(CERBERUS GUINARD)
(EXAMPLE)

SMOKE DETECTOR
(KIDDE)
(EXAMPLE)

2795605 S0000637144_V2

Cargo Bay Smoke Detector Cleaning
Figure 701/26-16-01-990-803 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO ELECTRONIC UNIT - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the Cargo Electronic Unit (CEU).

(2) An installation of the CEU.

B. The CEUs are installed in the ceiling of each cargo bay.

TASK 26-16-02-000-801

2. Cargo Electronic Unit Removal

(Figure 401)

A. General

(1) This task gives instructions to remove the Cargo Electronic Unit (CEU).

B. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
141	Aft Cargo Compartment - Left

C. Prepare for the Removal

SUBTASK 26-16-02-860-001

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-16-02-020-004

(2) To get access to the CEU, remove the screws [4] that attach the cover [7] to the cargo bay ceiling.

D. CEU Removal

SUBTASK 26-16-02-860-002

(1) Remove the screws [2] that attach the cargo electronic unit [1] to the airplane.

SUBTASK 26-16-02-020-002

(2) Disconnect the electrical connectors from the cargo electronic unit [1].

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Cargo Electronic Unit Removal
Figure 401/26-16-02-990-801 (Sheet 1 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO ELECTRONIC UNIT
(EXAMPLE)

C

H01656 S0006568174_V6

Cargo Electronic Unit Removal
Figure 401/26-16-02-990-801 (Sheet 2 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

D

H01657 S0006568177_V2

Cargo Electronic Unit Removal
Figure 401/26-16-02-990-801 (Sheet 3 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-16-02-400-801

3. Cargo Electronic Unit Installation

(Figure 401)

A. General

(1) This task gives instructions to install the Cargo Electronic Unit (CEU).

B. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Cargo electronic unit	26-16-01-05-215	LOM ALL
		26-16-01-08-225	LOM ALL

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
141	Aft Cargo Compartment - Left

D. Prepare for the Installation

SUBTASK 26-16-02-860-003

(1) Make sure that these circuit breakers are open:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

E. CEU Installation

SUBTASK 26-16-02-420-001

(1) Connect the airplane electrical connectors to the electrical connectors on the cargo electronic unit [1].

SUBTASK 26-16-02-420-002

(2) Put the cargo electronic unit [1] in position on the airplane bracket and attach it with screws [2].

F. CEU Test

SUBTASK 26-16-02-860-009

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-16-02-700-001

(2) Push and hold the LAMP TEST switch, on the CEU.

(a) Make sure that all A and B loop smoke detector indicators, on the CEU, come on.

SUBTASK 26-16-02-700-002

(3) Release the LAMP TEST switch.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-16-02-700-003

(4) Push and hold the PRESS TO TEST switch, on the CEU, for a minimum of five seconds.

(a) Make sure that all A and B loop smoke detector indicators, on the CEU, come on.

SUBTASK 26-16-02-700-004

(5) Release the PRESS TO TEST switch.

G. Put the Airplane Back to Its Usual Condition

SUBTASK 26-16-02-410-001

(1) Put the cover [7] in position on the cargo ceiling and attach it with screws [4].

——— END OF TASK ———

TASK 26-16-02-710-801

4. Cargo Electronic Unit Installation Test

(Figure 401)

A. Prepare for the Test

SUBTASK 26-16-02-860-004

(1) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-16-02-020-003

(2) If they are installed, remove the screws [4] that attach the cover [7] to the cargo bay ceiling.

B. Do the Test

SUBTASK 26-16-02-710-001

(1) Push and hold the LAMP TEST switch on the CEU.

(a) Make sure all A and B loop smoke detector indicators, on the CEU, come on.

SUBTASK 26-16-02-710-002

(2) Release the LAMP TEST switch.

SUBTASK 26-16-02-710-003

(3) Push and hold the PRESS TO TEST switch on the CEU for a minimum of five seconds.

(a) Make sure all A and B loop smoke detector indicators, on the CEU, come on.

SUBTASK 26-16-02-710-004

(4) Release the PRESS TO TEST switch.

C. Put the Airplane Back to Its Usual Condition

SUBTASK 26-16-02-420-003

(1) Put the cover [7] in position on the cargo ceiling and attach it with screws [4].

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WHEEL WELL, WING AND LOWER AFT BODY OVERHEAT DETECTION SYSTEM - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

(1) Wheel well, wing and lower aft body overheat detection system - deactivation.

(2) Wheel well, wing and lower aft body overheat detection system - activation.

TASK 26-18-00-040-801

2. Wheel Well, Wing and Lower Aft Body Overheat Detection System - Deactivation

A. General

(1) This task will deactivate the wheel well, wing and lower aft body overheat detection system.

B. Location Zones

Zone	Area
129	Keel Beam (Part) Body Station 501.70 to Body Station 540.00
131	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Left
132	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
139	Keel Beam, (Part) Body Station 540.00 to Body Station 727.00
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right
149	Keel Beam (Part) Body Station 727.00 to Body Station 743.95
191	Lower Wing-To-Body Fairing - Forward of Wing Box
192	Lower Wing-To-Body Fairing - Under Wing Box
311	Area Aft of Pressure Bulkhead - Left
431	Engine 1 - Forward Strut Fairing
441	Engine 2 - Forward Strut Fairing
511	Left Wing - Leading Edge To Front Spar
521	Left Wing - Leading Edge to Front Spar
611	Right Wing - Leading Edge to Front Spar
621	Right Wing - Leading Edge to Front Spar

C. Procedure

SUBTASK 26-18-00-020-001

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

D. Wheel Well, Wing and Lower Aft Body Overheat Detection System - Tryout

NOTE: This tryout is to make sure that the power to the wheel well, wing and lower aft body overheat detection system is in zero energy state.

SUBTASK 26-18-00-410-001

(1) Push and hold the OVHT TEST switch on the P5-10 panel for a minimum of 5 seconds.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) Make sure that neither of the two WING-BODY OVERHEAT lights comes on.

(b) On the P7 panel, make sure that the AIR COND light does not come on.

(c) On the P7 panel, make sure that the captain's and the first officer's MASTER CAUTION lights do not come on.

SUBTASK 26-18-00-020-002

(2) Release the OVHT TEST switch.

SUBTASK 26-18-00-410-002

(3) Put and hold the TEST switch to the OVHT/FIRE position on the P8-1 panel.

(a) Make sure that the WHEEL WELL light does not come on.

(b) Make sure that the flight compartment fire bell does not come on.

SUBTASK 26-18-00-020-003

(4) Release the TEST switch.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

FIRST OFFICER'S WARNING LIGHTS (P7)
(CAPTAIN'S FIRE WARN AND MASTER CAUTION LIGHTS ARE OPPOSITE)

B

BLEED AIR CONTROL MODULE (P5)

A

FIRE CONTROL PANEL (P8-1)

C

1 FIRST OFFICER'S

G22042 S0006568202_V3

Wheel Well, Wing and Lower Aft Body Overheat Detection System
Figure 201/26-18-00-990-802

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-18-00-440-801

3. **Wheel Well, Wing and Lower Aft Body Overheat Detection System - Activation**
(Figure 201)

A. General

(1) This task will activate the wheel well, wing and lower aft body overheat detection system.

B. Location Zones

Zone	Area
129	Keel Beam (Part) Body Station 501.70 to Body Station 540.00
131	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Left
132	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
139	Keel Beam, (Part) Body Station 540.00 to Body Station 727.00
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right
149	Keel Beam (Part) Body Station 727.00 to Body Station 743.95
191	Lower Wing-To-Body Fairing - Forward of Wing Box
192	Lower Wing-To-Body Fairing - Under Wing Box
311	Area Aft of Pressure Bulkhead - Left
431	Engine 1 - Forward Strut Fairing
441	Engine 2 - Forward Strut Fairing
511	Left Wing - Leading Edge To Front Spar
521	Left Wing - Leading Edge to Front Spar
611	Right Wing - Leading Edge to Front Spar
621	Right Wing - Leading Edge to Front Spar

C. Procedure

SUBTASK 26-18-00-420-001

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WHEEL WELL, WING AND LOWER AFT BODY OVERHEAT DETECTION SYSTEM - ADJUSTMENT/TEST

1. **General**
   A. This procedure contains scheduled maintenance task data.
   B. The procedures that follow contain the tests for the wheel well, wing and lower aft body overheat detection system, which will be referred to as the overheat detection system throughout the procedures.
   C. This procedure consists of this task:
      (1) An operational test of the overheat detection system.

TASK 26-18-00-710-801

2. **Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test**
(Figure 501)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This procedure does a check of the Overheat Fire Detection System without disturbing the detection system and it only uses the equipment that is on the airplane.

(2) This procedure can be performed on the flight deck, or in the E/E bay.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

C. Prepare for the Operational Test

SUBTASK 26-18-00-860-002

(1) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
F	12	C00318	INDICATOR MASTER DIM SECT 6
F	13	C01179	INDICATOR MASTER DIM SECT 7
F	14	C01180	INDICATOR MASTER DIM SECT 8

SUBTASK 26-18-00-860-003

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

D. Overheat Detection System Operational Test - Flight Compartment

SUBTASK 26-18-00-710-001

(1) Move and hold the TEST switch on the Engine and APU Fire Control Panel to the OVHT/FIRE position.

(a) Make sure the WHEEL WELL light on the Engine and APU Fire Control Panel comes on.

(b) Make sure the Captain's and First Officer's FIRE WARN lights on the Pilot's Glareshield, P7, come on.

(c) Make sure the flight compartment fire bell in the Aural Warning Module, M315, comes on.

SUBTASK 26-18-00-710-013

(2) Push the BELL CUTOUT switch on the P8-1 panel.

(a) Make sure the fire bell goes off immediately.

(b) Make sure that both FIRE WARN lights go off.

(c) Make sure the WHEEL WELL light on the P8-1 panel remains on.

SUBTASK 26-18-00-710-014

(3) Set the LIGHTS switch on the pilots main panel, P1 to DIM.

(a) Make sure the WHEEL WELL light dims.

SUBTASK 26-18-00-710-015

(4) Set the LIGHTS switch on the pilots main panel, P1 to BRT.

(a) Make sure the WHEEL WELL light returns to its original brightness.

SUBTASK 26-18-00-710-002

(5) Release the TEST switch on the Engine and APU Fire Control Panel.

(a) Make sure the WHEEL WELL light on the Engine and APU Fire Control Panel goes off.

(b) Make sure the Captain's and First Officer's FIRE WARN lights on the Pilot's Glareshield remains off.

(c) Make sure the flight compartment fire bell in the Aural Warning Module, M315, remains off.

SUBTASK 26-18-00-710-003

(6) Push and hold the OVHT TEST switch on the air conditioning panel, P5-10, for at least 5 seconds.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) On the air conditioning panel, P5-10, make sure these lights come on:

1) The left WING-BODY OVERHEAT light.

2) The right WING-BODY OVERHEAT light.

(b) On the Pilot's Glareshield, P7, make sure these lights come on:

1) The AIR COND light.

2) The Captain's and First Officer's MASTER CAUTION lights.

SUBTASK 26-18-00-710-004

(7) Release the OVHT TEST switch on the air conditioning panel, P5-10.

(a) On the air conditioning panel, P5-10, make sure these lights go off:

1) The left WING-BODY OVERHEAT light.

2) The right WING-BODY OVERHEAT light.

(b) On the Pilot's Glareshield, P7, make sure these lights go off:

1) The AIR COND light.

2) The Captain's and First Officer's MASTER CAUTION lights.

LOM ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

E. Overheat Detection System Operational Test - E/E Bay

SUBTASK 26-18-00-710-005

(1) Push and release the DISP TEST switch on the compartment overheat detection module, M237.

(a) Make sure the code 88 comes on, then goes off.

SUBTASK 26-18-00-710-006

(2) Push and release the LOC TEST switch on the compartment overheat detection module, M237.

(a) Make sure the code 90 comes on while the test is in progress, then the code 99 comes on to show there are no faults.

SUBTASK 26-18-00-710-007

(3) Push and release the MEM READ switch on the compartment overheat detection module, M237.

(a) Make sure the code 97 comes on to show the test is complete.

SUBTASK 26-18-00-710-008

(4) Push and release the MEM CLEAR switch on the compartment overheat detection module, M237.

(a) Make sure the code 97 goes off.

(b) Make sure the MAINT ADV light stays off.

LOM ALL; AIRPLANES WITH CODM P/N 475928-01

F. Overheat Detection System Operational Test - E/E Bay

SUBTASK 26-18-00-710-009

(1) Push and release the DISPLAY TEST switch on the compartment overheat detection module.

(a) Make sure all LEDs come on, then go off.

SUBTASK 26-18-00-710-010

(2) Push and release the LOCAL TEST switch on the compartment overheat detection module.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH CODM P/N 475928-01 (Continued)

(a) Make sure the code CONFIG NEXTGEN1 comes on while the test is in progress, then the code TEST COMPLETE comes on to show there are no faults.

NOTE: If other codes are displayed, faults exist in the system which must be corrected.

SUBTASK 26-18-00-710-011

(3) Push and release the MEMORY READ switch on the compartment overheat detection module.

(a) Make sure the code END OF MEMORY comes on to show the MEMORY READ is complete.

SUBTASK 26-18-00-710-012

(4) Push and hold momentarily the MEMORY CLEAR switch on the compartment overheat detection module, M237.

(a) Make sure the MEMORY CLEAR is displayed.

(b) Make sure the MAINT ADV light stays off.

LOM ALL

G. Put the Airplane Back to its Usual Condition.

SUBTASK 26-18-00-860-004

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

FIRST OFFICER'S WARNING LIGHTS (P7)
(CAPTAIN'S FIRE WARN AND MASTER CAUTION LIGHTS ARE OPPOSITE)

B

BLEED AIR CONTROL MODULE (P5)

A

FIRE CONTROL PANEL (P8-1)

C

1 FIRST OFFICER'S

G22042 S0006568202_V3

Wheel Well, Wing and Lower Aft Body Overheat Detection System Operational Test
Figure 501/26-18-00-990-801 (Sheet 1 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ELECTRONIC EQUIPMENT RACK, E1

D

G22043 S0006568203_V2

Wheel Well, Wing and Lower Aft Body Overheat Detection System Operational Test
Figure 501/26-18-00-990-801 (Sheet 2 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

STEP	TEST	ACTION	RESPONSE
1	TEST DISPLAY	DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK
2	READ ALARM FAULT MEMORY	MOMENTARILY DEPRESS "MEM READ"*	FAULTS & ALARMS ARE DISPLAYED THEN 97 (MEM READ COMPLETE) & THEN BLANK
3	SYSTEM TEST	MOMENTARILY DEPRESS "LOC TEST"*	CODE 90 EXISTING FAULT CODES & THEN 99
4	ERASE(1) ALARM FAULT MEMORY	DEPRESS "MEM READ"* UNTIL CODE TO BE ERASED IS DISPLAYED THEN PRESS "MEM CLR"*	ERASE CODE GOES BLANK DEPRESS "MEM CLR" AGAIN WHEN 97 IS DISPLAYED AND DISPLAY WILL BLANK
5	ABORT	MOMENTARILY DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK

ZONE/SITUATION	ALARM (2)	OPEN LOOP	SHORT LOOP
LEFT WING LE	14	12	10
LEFT AC PACK BAY	24	22	20
KEELBEAM	34	32	30
AFT CARGO SECT.	44	42	40
RIGHT WING LE AND AC PACK BAY	64	62	60
WHEEL WELL FIRE	84	-	-

LOCAL TEST	IN PROGRESS	NOT COMPLETE	COMPLETE
	90	98	99

G22051 S0006568204_V2

Wheel Well, Wing and Lower Aft Body Overheat Detection System Operational Test
Figure 501/26-18-00-990-801 (Sheet 3 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

STEP	TEST	ACTION	RESPONSE
1	TEST DISPLAY	DEPRESS "DISPLAY TEST"	ON THEN BLANK
2	READ STATUS	*DEPRESS "MEMORY READ"	RECORDS ARE DISPLAYED
3	SYSTEM TEST	DEPRESS "LOCAL TEST"	CONFIG AND FAULTS DISPLAY
4	CLEAR MEMORY	HOLD "MEMORY CLEAR"	MEMORY CLEARED

E

2458030 S0000572056_V1

Wheel Well, Wing and Lower Aft Body Overheat Detection System Operational Test
Figure 501/26-18-00-990-801 (Sheet 4 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

COMPARTMENT OVERHEAT DETECTION CONTROL UNIT, M237 - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the Compartment Overheat Detection Control Unit (M237), referred to as the control unit.

(2) An installation of the Compartment Overheat Detection Control Unit.

B. The Compartment Overheat Detection Control Unit is installed on the E1-4 shelf in the electronic equipment compartment.

TASK 26-18-01-000-801

2. Compartment Overheat Detection Control Unit Removal

(Figure 401)

A. General

(1) This task gives instructions to remove the Compartment Overheat Detection Control Unit.

B. References

Reference	Title
20-10-07-000-801	E/E Box Removal (P/B 201)

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Prepare for the Removal

SUBTASK 26-18-01-860-004

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

SUBTASK 26-18-01-010-004

(2) Open this access door:

Number	Name/Location
117A	Electronic Equipment Access Door

F. Compartment Overheat Detection Control Unit Removal

SUBTASK 26-18-01-020-001

(1) Remove the compartment overheat detection control unit [1], do this task: E/E Box Removal, TASK 20-10-07-000-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G26769 S0006568208_V3

Compartment Overheat Detection Control Unit Installation
Figure 401/26-18-01-990-801 (Sheet 1 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

STEP	TEST	ACTION	RESPONSE
1	TEST DISPLAY	DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK
2	READ ALARM FAULT MEMORY	MOMENTARILY DEPRESS "MEM READ"*	FAULTS & ALARMS ARE DISPLAYED THEN 97 (MEM READ COMPLETE) & THEN BLANK
3	SYSTEM TEST	MOMENTARILY DEPRESS "LOC TEST"*	CODE 90 EXISTING FAULT CODES & THEN 99
4	ERASE(1) ALARM FAULT MEMORY	DEPRESS "MEM READ"* UNTIL CODE TO BE ERASED IS DISPLAYED THEN PRESS "MEM CLR"**	ERASE CODE GOES BLANK DEPRESS "MEM CLR" AGAIN WHEN 97 IS DISPLAYED AND DISPLAY WILL BLANK
5	ABORT	MOMENTARILY DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK

ZONE/SITUATION	ALARM (2)	OPEN LOOP	SHORT LOOP
LEFT WING LE	14	12	10
LEFT AC PACK BAY	24	22	20
KEELBEAM	34	32	30
AFT CARGO SECT.	44	42	40
RIGHT WING LE AND AC PACK BAY	64	62	60
WHEEL WELL FIRE	84	-	-

LOCAL TEST	IN PROGRESS	NOT COMPLETE	COMPLETE
	90	98	99

[1] COMPARTMENT OVERHEAT DETECTION CONTROL UNIT

B

G26771 S0006568209_V2

Compartment Overheat Detection Control Unit Installation
Figure 401/26-18-01-990-801 (Sheet 2 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

[1] COMPARTMENT OVERHEAT DETECTION CONTROL UNIT

B

2458153 S0000572092_V1

Compartment Overheat Detection Control Unit Installation
Figure 401/26-18-01-990-801 (Sheet 3 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-18-01-400-801

3. Compartment Overheat Detection Control Unit Installation

(Figure 401)

A. General

(1) This task gives instructions to install the Compartment Overheat Detection Control Unit.

B. References

Reference	Title
20-10-07-400-801	E/E Box Installation (P/B 201)
26-18-00-710-801	Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test (P/B 501)

C. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

D. Access Panels

Number	Name/Location
117A	Electronic Equipment Access Door

E. Prepare for the Installation

SUBTASK 26-18-01-860-005

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

SUBTASK 26-18-01-010-005

(2) Open this access door:

Number	Name/Location
117A	Electronic Equipment Access Door

F. Compartment Overheat Detection Control Unit Installation

SUBTASK 26-18-01-020-002

(1) Install the compartment overheat detection control unit [1], do this task: E/E Box Installation, TASK 20-10-07-400-801.

G. Compartment Overheat Detection Control Unit Installation Test

SUBTASK 26-18-01-860-003

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

SUBTASK 26-18-01-710-001

(2) Do this task: Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test, TASK 26-18-00-710-801.

NOTE: Do the portion of the test for the E/E bay.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

H. Put the Airplane Back to Its Usual Condition

SUBTASK 26-18-01-010-003

(1) Close this access door:

Number	Name/Location
117A	Electronic Equipment Access Door

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

COMPARTMENT OVERHEAT DETECTION CONTROL UNIT, M237 - ADJUSTMENT/TEST

1. General

A. The wheel well fire, wing & body overheat detection control module, M237 is located on the E1-4 shelf in the electronic equipment (EE) compartment.

B. This procedure has this task:

(1) The Compartment Overheat Detection Control Unit (M237), BITE test.

C. Do not hold the control module switches in the CLOSED position for more than 10 seconds or the software could stop the test.

D. Unless the test specifies differently, continue from one step to the subsequent step in less than 40 seconds.

TASK 26-18-01-740-801

2. Compartment Overheat Detection Control Unit, M237

(Figure 501)

A. General

(1) The wheel well fire, wing and body overheat detection control module, M237 is located on the E1-4 shelf in the electronic equipment (EE) compartment. The wheel well fire, wing & body overheat detection control module will be referred to as the control module throughout this procedure. Access the front of panel of the control module to do the BITE test.

(2) This task gives instructions to perform these procedures with the control module:

(a) Display Test Procedure

(b) Local Test Procedure

(c) Memory Read Procedure

(d) Memory Clear Procedure

LOM ALL; AIRPLANES WITH CODM P/N 475928-01

(e) Zone Resistance Test.

LOM ALL

(3) Do not hold the control module switches in the CLOSED position for more than 10 seconds or the software could stop the test.

(4) Unless the test specifies differently, continue from one step to the subsequent step in less than 40 seconds.

B. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left

C. BITE Procedure

SUBTASK 26-18-01-740-001

(1) Do these steps to do the display procedure:

LOM ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

(a) Push and release the DISP TEST switch on the compartment overheat detection module.

1) Make sure the code 88 comes on, then goes off.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH CODM P/N 475928-01

(b) Push and release the DISPLAY TEST switch on the compartment overheat detection module.

1) Make sure all LEDs come on, then go off.

LOM ALL

SUBTASK 26-18-01-740-002

(2) Do these steps to do the local test procedure for the control module:

LOM ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

(a) Push and release the LOC TEST switch on the compartment overheat detection module.

1) Make sure the FAULT & ALARM CODE display shows code 90 comes on while the test is in progress, then the code 99 comes on to show the test is complete.

LOM ALL; AIRPLANES WITH CODM P/N 475928-01

(b) Push and release the LOCAL TEST switch on the compartment overheat detection module.

1) Make sure the FAULT & ALARM CODE display shows code CONFIG NEXTGEN1 comes on while the self-test is in progress, then the code TEST COMPLETE comes on to show there are no faults.

NOTE: If other codes are displayed, faults exist in the system which must be corrected.

LOM ALL

(c) If an alarm/fault condition is found, the display will show a fault code.

LOM ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

1) Refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message for the fault indicated by the FAULT & ALARM CODE display.

LOM ALL; AIRPLANES WITH CODM P/N 475928-01

2) Refer to the table at the end of this task to find the fault isolation task for the applicable maintenance message for the fault indicated by the FAULT & ALARM CODES display.

LOM ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

SUBTASK 26-18-01-740-003

(3) Do these steps to do the memory read procedure:

(a) Push the MEM READ switch on the compartment overheat detection module.

1) The FAULT & ALARM CODE display shows the latest fault code.

NOTE: As many as 10 alarm/fault codes can be kept in non-volatile memory. Code 97 shows that all codes have been read.

(b) Push the MEM READ switch again until all the alarm/fault codes have been read, and code 97 shows.

(c) Push the MEM READ switch again so the display shows no data.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH CODM P/N 475928-01

SUBTASK 26-18-01-740-004

(4) Do these steps to do the memory read procedure:

(a) Push and release the MEMORY READ switch on the compartment overheat detection module.

1) Make sure the code END OF MEMORY comes on to show the test is complete.

2) Push and release the MEMORY READ switch again until all the alarm/faults have been read.

NOTE: A minimum of 10 LRU failures can be stored in non-volatile memory.

3) Push and release the MEMORY READ switch again so the display shows no data.

LOM ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

SUBTASK 26-18-01-740-005

(5) Do these steps to do the memory clear procedure.

(a) Push the DISP TEST switch on the control module.

1) The FAULT & ALARM CODE display shows code 88 and then the display is blank.

(b) Push the LOC TEST switch on the control module.

1) The FAULT & ALARM CODE display shows 90, then 99.

NOTE: After code 99 is shown, continue with the next step in less than 10 seconds.

2) If code 93 or 94 is displayed, push and release LOC TEST until code 99 is shown.

NOTE: After code 99 is shown, continue with the next step in less than 10 seconds.

(c) Push and release the MEM READ switch on the control module until the display shows the code to be removed.

NOTE: If there are fault codes in the memory, the display will show the last code that was recorded. If there are no fault codes in the memory, the display will show code 97.

(d) Push and release the MEM CLEAR switch to clear the displayed code.

1) The display shows no data.

(e) Push and release the MEM READ switch again to display the next code.

1) Repeat the two steps above until code 97 appears.

NOTE: Alarm/fault codes can not be removed until the condition is corrected.

(f) Push the MEM READ switch again so the display shows no data and the MAINT ADV light is off.

LOM ALL; AIRPLANES WITH CODM P/N 475928-01

SUBTASK 26-18-01-740-006

(6) Do these steps to do the memory clear procedure.

(a) Push and momentarily hold the MEMORY CLEAR switch on the control module.

(b) Make sure that the MEMORY CLEAR is displayed.

(c) Make sure that the MAINT ADV light stays off.

NOTE: If there are fault codes in the memory, the display will show the last code that was recorded. If there are no fault codes in the memory, the display will show no data.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH CODM P/N 475928-01 (Continued)

(d) Push and release the MEMORY CLEAR switch to clear the displayed code.

1) The display shows no data.

(e) Push and release the MEMORY READ switch again to display the next code.

1) Repeat the two steps above until no data shows.

NOTE: Alarm/fault codes can not be removed until the condition is corrected.

(f) Push the MEMORY READ switch again so the display shows no data and the MAINT ADV light is off.

SUBTASK 26-18-01-740-007

(7) Do these steps to do the Zone Resistance test (CODM BITE):

(a) Push and release the LOCAL TEST button on the front panel of the CODM.

1) The front panel of the CODM displays CONFIG NEXTGEN1 followed by L WING.

(b) Continue to push and release LOCAL TEST. This will cycle through the different zones followed by LOOP ___ which shows the resistance value in the loop or 2GND_____ which shows the resistance value to ground.

NOTE: If the loops are functioning properly all zones will have a 2GND value of 5000.

(c) Make sure that the resistance value agree with the Table 501 below:

Table 501/26-18-01-993-801 Zone Resistance Test Data

KIDDE ALARM/FAULT CODES	RESISTANCE VALUE or FAULT MESSAGE	SENSORS
L WING L WING OPEN L WING OVHT L WING SHRT	< 15 Ohms OPEN LOW 0	M370, M268, M1761, M1762
L PACK BAY L PACK BAY OPEN L PACK BAY OVHT L PACK BAY SHRT	< 15 Ohms OPEN LOW 0	M1911, M1909, M355
KEELBEAM KEELBEAM OPEN KEELBEAM OVHT KEELBEAM SHRT	< 15 Ohms OPEN LOW 0	M272, M273, M3922
R SIDE R SIDE OPEN R SIDE OVHT R SIDE SHRT	< 20 Ohms OPEN LOW 0	M1763, M1764, M269, M371, M356, M1910, M1912
MWW LOOP A MWW LOOP A OPEN MWW LOOP A FIRE MWW LOOP A SHRT	< 15 Ohms OPEN LOW 0	M270

LOM ALL

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G26769 S0006568208_V3

Compartment Overheat Detection Control Unit, M237
Figure 501/26-18-01-990-802 (Sheet 1 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

STEP	TEST	ACTION	RESPONSE
1	TEST DISPLAY	DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK
2	READ ALARM FAULT MEMORY	MOMENTARILY DEPRESS "MEM READ"*	FAULTS & ALARMS ARE DISPLAYED THEN 97 (MEM READ COMPLETE) & THEN BLANK
3	SYSTEM TEST	MOMENTARILY DEPRESS "LOC TEST"*	CODE 90 EXISTING FAULT CODES & THEN 99
4	ERASE (1) ALARM FAULT MEMORY	DEPRESS "MEM READ"* UNTIL CODE TO BE ERASED IS DISPLAYED THEN PRESS "MEM CLR"**	ERASE CODE GOES BLANK DEPRESS "MEM CLR" AGAIN WHEN 97 IS DISPLAYED AND DISPLAY WILL BLANK
5	ABORT	MOMENTARILY DEPRESS "DISP TEST"	CODE 88 AND THEN BLANK

ZONE/SITUATION	ALARM (2)	OPEN LOOP	SHORT LOOP
LEFT WING LE	14	12	10
LEFT AC PACK BAY	24	22	20
KEELBEAM	34	32	30
AFT CARGO SECT.	44	42	40
RIGHT WING LE AND AC PACK BAY	64	62	60
WHEEL WELL FIRE	84	-	-

LOCAL TEST	IN PROGRESS	NOT COMPLETE	COMPLETE
	90	98	99

[1] COMPARTMENT OVERHEAT DETECTION CONTROL UNIT

B

G26771 S0006568209_V2

Compartment Overheat Detection Control Unit, M237
Figure 501/26-18-01-990-802 (Sheet 2 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

[1] COMPARTMENT OVERHEAT DETECTION CONTROL UNIT

B

2458153 S0000572092_V1

Compartment Overheat Detection Control Unit, M237
Figure 501/26-18-01-990-802 (Sheet 3 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-18-01-700-801

3. Compartment Overheat System Automated Test with WiNMS Aero FLi Test Kit

Figure 502

A. General

This task provides instructions on how to attach, test, and diagnose the Compartment Overheat System utilizing the WiN MS Aero FLi test set.

B. References

Reference	Title
24-22-00-860-811	Supply Electrical Power (P/B 201)
24-22-00-860-812	Remove Electrical Power (P/B 201)
26-18-01-000-801	Compartment Overheat Detection Control Unit Removal (P/B 401)
26-18-01-400-801	Compartment Overheat Detection Control Unit Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-23026	Tester - Overheat Detection Loop, Aero Fli Part #: 411001 Supplier: FB3T5

D. Location Zones

Zone	Area
118	Electrical and Electronics Compartment - Right

E. Prepare for the Compartment Overheat System Automated Test

SUBTASK 26-18-01-860-006

(1) Do this task: Remove Electrical Power, TASK 24-22-00-860-812.

NOTE: Failure to remove power from the aircraft will result in inaccurate test results.

SUBTASK 26-18-01-020-003

(2) Do this task: Compartment Overheat Detection Control Unit Removal, TASK 26-18-01-000-801.

SUBTASK 26-18-01-480-001

(3) Install the aero fli overheat detection loop tester, SPL-23026:

(a) Install the interface module on the Compartment Overheat Detection Control Unit rack.

(b) Connect the cable to the interface tablet and the interface module.

(c) Turn on the interface module.

(d) Turn on the interface tablet.

F. Compartment Overheat System Automated Test

SUBTASK 26-18-01-700-001

(1) Perform the automated test:

NOTE: For detailed instructions please refer to equipment user manual.

(a) Start the AERO FLi (or OHDL Studio) App.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) Enter the applicable Operator, Station, and Aircraft ID information.

NOTE: This will be used for PDF report.

(c) Select the applicable Program.

(d) Select Loop: [All].

(e) Select Static Test.

(f) Select the applicable loops that are to be scanned.

(g) it's Select Launch Scan.

1) If the scan takes longer than two minutes, restart the hardware.

(h) When scan is finished, select PDF Report.

(i) Review the PDF report to identify possible problems among the reported items.

1) If problems are found, the report will show the location of the problem.

2) Correct the problems and perform the automated test again.

3) When the problems have been corrected, there will be no problems listed in the report.

G. Put the Aircraft Back to its Usual Condition

SUBTASK 26-18-01-080-001

(1) Remove the Aero FLi interface module:

(a) Turn off the interface module.

(b) Turn off the interface tablet.

(c) Disconnect the interface cable.

(d) Remove the module from the rack.

SUBTASK 26-18-01-020-004

(2) Do this task: Compartment Overheat Detection Control Unit Installation, TASK 26-18-01-400-801.

SUBTASK 26-18-01-860-007

(3) Do this task: Supply Electrical Power, TASK 24-22-00-860-811.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

3027596 S0000797678_V1

Compartment Overheat System Automated Test with WiNMS Aero FLi Test Kit
Figure 502/26-18-01-990-803 (Sheet 1 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

BOEING	Validation Report WiN MS - AERO FLi	WiN MS

B737 Keel Beam Loop ✓

Channel		
Condition		Good
Location		
Severity		0%

B737 Left Aft Loop

Channel		
Condition		**OPEN**
Location	**Faulty Injection** **Distance from injection**	**W5592-6001R/M275** **55.18 m**
Severity		**100%**

3027634 S0000797679_V1

Compartment Overheat System Automated Test with WiNMS Aero FLi Test Kit
Figure 502/26-18-01-990-803 (Sheet 2 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Overview

	Scan?	Loop	Channel	Mux	Done
▶	☑	B737 Keel Beam Loop		5	?
	☑	B737 Keel Beam Loop		6	?
	☑	B737 Left AC Pack Loop		4	?
	☑	B737 Left AC Pack Loop		3	?
	☑	B737 Left Aft Loop		7	?
	☑	B737 Left Aft Loop		8	?
	☑	B737 Left Wing Loop		1	?
	☑	B737 Left Wing Loop		2	?
	☑	B737 Right Side Loop		9	?
	☑	B737 Right Side Loop		10	?
	☑	B737 Wheel Well Loop		11	?
	☑	B737 Wheel Well Loop		12	?

Launch Scan

3027615 S0000797753_V1

Compartment Overheat System Automated Test with WiNMS Aero FLi Test Kit
Figure 502/26-18-01-990-803 (Sheet 3 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - REMOVAL/INSTALLATION

1. General

A. This section contains procedures to remove and install the long sensor elements, and the looped sensor elements.

(1) The long sensor elements are located in the wing area, the forward A/C Pack Bay, the Wheel Well, and the Aft Body Area.

(2) The looped sensor elements are located in the mid and aft A/C pack, and along the strut.

B. The minimum element bend radius is 1 in. (25.4 mm). The best bend radius is three inches.

C. The sensor element must be straight and away from the connector for one inch before bending.

D. A list of all the compartment overheat detection sensing elements is shown in Table 401. Each loop is made up of one or more sensing elements that make a complete circuit with the Compartment Overheat Detection Module, M237. The loop is defined by the two pins in the electrical connector D742 that complete the circuit. The pins that define each loop are shown in the column "D742 PINS" of Table 401.

TASK 26-18-02-000-801

2. Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Removal

(Figure 401, Figure 402, Figure 403, Figure 404, Figure 406, Figure 407, Figure 408)

A. General

(1) This task gives instructions to remove the Wheel Well, Wing and Lower Aft Body Overheat Sensor Element.

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Lower Half of the Fuselage (P/B 201)
20-10-44-000-801	Lockwire, Cotter Pins, and Lockrings - Removal (P/B 401)
27-81-00-040-801	Leading Edge Flaps and Slats Deactivation (P/B 201)
27-81-00-440-801	Leading Edge Flaps and Slats - Activation (P/B 201)
27-81-00-860-803	Leading Edge Flaps and Slats Extension (P/B 201)
27-81-00-860-804	Leading Edge Flaps and Slats Retraction (P/B 201)

C. Consumable Materials

Reference	Description	Specification
G50347	Lockwire - MS20995NC32, Monel - 0.032 Inch (0.8128 mm) Diameter	NASM20995

D. Location Zones

Zone	Area
129	Keel Beam (Part) Body Station 501.70 to Body Station 540.00
131	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Left
132	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
139	Keel Beam, (Part) Body Station 540.00 to Body Station 727.00
141	Aft Cargo Compartment - Left

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Zone	Area
142	Aft Cargo Compartment - Right
149	Keel Beam (Part) Body Station 727.00 to Body Station 743.95
191	Lower Wing-To-Body Fairing - Forward of Wing Box
192	Lower Wing-To-Body Fairing - Under Wing Box
311	Area Aft of Pressure Bulkhead - Left
431	Engine 1 - Forward Strut Fairing
441	Engine 2 - Forward Strut Fairing
511	Left Wing - Leading Edge To Front Spar
521	Left Wing - Leading Edge to Front Spar
611	Right Wing - Leading Edge to Front Spar
621	Right Wing - Leading Edge to Front Spar

E. Access Panels

Number	Name/Location
191FL	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191FR	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191HL	Ram Air Inlet Lip Panel - Forward
191HR	Ram Air Inlet Lip Panel - Forward
192CL	ECS Access Door
192CR	ECS Access Door
192DR	ECS High Pressure Access Door
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BT	Forward Strut Fairing, Pressure Relief Door, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BT	Forward Strut Fairing, Pressure Relief Door, Strut 2
511AB	Inboard Leading Edge, Lower Removable Panel
521AB	Outboard Leading Edge Blowout Door - Slat Station 20.04
611AB	Inboard Leading Edge, Lower Removable Access Panel
621AB	Outboard Leading Edge Blowout Door - Slat Station 20.04

F. Prepare for the Removal

SUBTASK 26-18-02-860-001

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

SUBTASK 26-18-02-410-005

CAUTION

DO NOT OPEN THE ECS ACCESS DOOR 192CR, UNTIL YOU OPEN THE ECS HIGH PRESSURE ACCESS DOOR 192DR. IF YOU DO NOT OBEY, DAMAGE TO THE ECS HIGH PRESSURE ACCESS DOOR 192DR, ITS LATCHES AND HINGES CAN OCCUR.

(2) To get access to the right ECS access doors, do these steps (TASK 06-41-00-800-801):

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) Open this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

(b) Open this access panel:

Number	Name/Location
192CR	ECS Access Door

SUBTASK 26-18-02-010-001

(3) Open these access panels:

Number	Name/Location
191FL	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191FR	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191HL	Ram Air Inlet Lip Panel - Forward
191HR	Ram Air Inlet Lip Panel - Forward
192CL	ECS Access Door
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BT	Forward Strut Fairing, Pressure Relief Door, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BT	Forward Strut Fairing, Pressure Relief Door, Strut 2
521AB	Outboard Leading Edge Blowout Door - Slat Station 20.04
621AB	Outboard Leading Edge Blowout Door - Slat Station 20.04

Remove these panels

Number	Name/Location
511AB	Inboard Leading Edge, Lower Removable Panel
611AB	Inboard Leading Edge, Lower Removable Access Panel

Open the applicable access doors and panels Table 401.

Table 401/26-18-02-993-805

LOOP	D742 PINS	EQPT NO.	Sensor Element	Figure	DETECTOR	OPEN/REMOVE FOR ACCESS
1	4, 12	M370	element [16]	Figure 401	L WING INBOARD	LE SLATS - EXTEND FULLY AND DEACTIVATE (TASK 27-81-00-860-803 and TASK 27-81-00-040-801) - ACTIVATE AND RETRACT (TASK 27-81-00-860-804 and TASK 27-81-00-440-801) ECS ACCESS DOOR, 192CL RAM AIR INLET LIP PANEL, 191HL FORWARD WING TO BODY FAIRING PANEL, 191FL INBOARD LEADING EDGE, REMOVABLE ACCESS PANEL, 511AB

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Table 401/26-18-02-993-805 (Continued)

LOOP	D742 PINS	EQPT NO.	Sensor Element	Figure	DETECTOR	OPEN/REMOVE FOR ACCESS
		M268	element [17]	Figure 401	L WING OUTBOARD	LE SLATS - EXTEND FULLY AND DEACTIVATE (TASK 27-81-00-860-803 and TASK 27-81-00-040-801) - ACTIVATE AND RETRACT (TASK 27-81-00-860-804 and TASK 27-81-00-440-801) ECS ACCESS DOOR, 192CL RAM AIR INLET LIP PANEL, 191HL FORWARD WING TO BODY FAIRING PANEL, 191FL INBOARD LEADING EDGE, REMOVABLE ACCESS PANEL, 511AB
		M1761	element [18]	Figure 404	L STRUT FWD	FORWARD STRUT FAIRING, 431AT FORWARD STRUT FAIRING, 431BT
		M1762	element [30]	Figure 405	L STRUT AFT	OUTBOARD LEADING EDGE BLOWOUT ACCESS DOOR, 521AB
2	8, 2	M1911	element [26]	Figure 403	L AFT A/C PACK	ECS ACCESS DOOR, 192CL
		M1909	element [27]	Figure 403	L MID A/C PACK	ECS ACCESS DOOR, 192CL
		M355	element [28]	Figure 402	L FWD A/C PACK	ECS ACCESS DOOR, 192CL A/C PNEUMATIC TUBES
3	9, 29	M273	element [24]	Figure 408	AFT KEEL BEAM	PANELS BELOW BEAM LANDING GEAR TRANSFER VALVE HYDRAULIC LINES COVERS TO FORWARD BULKHEAD COVERS TO AFT BULKHEAD
		M272	element [25]	Figure 408	FWD KEELBEAM	
4	13, 27	M276	element [19]	Figure 407	AFT, SECTION 48	STAB TRIM ACCESS
		M275	element [20]	Figure 407	AFT, SECTION 47	AFT CARGO LINING
		M347	element [21]	Figure 407	AFT, SECTION 46	AFT CARGO LINING
		M1147	element [22]	Figure 407	AFT, SECTION 46	AFT CARGO LINING

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Table 401/26-18-02-993-805 (Continued)

LOOP	D742 PINS	EQPT NO.	Sensor Element	Figure	DETECTOR	OPEN/REMOVE FOR ACCESS
		M348	element [23]	Figure 407	AFT, SECTION 46	AFT CARGO LINING
6	11, 10	M1912	element [13]	Figure 403	R AFT A/C PACK	ECS ACCESS DOOR, 192CR
		M1910	element [14]	Figure 403	R MID A/C PACK	ECS ACCESS DOOR, 192CR
		M356	element [15]	Figure 402	R FWD A/C PACK	ECS ACCESS DOOR, 192CR A/C PNEUMATIC TUBES
		M371	element [16]	Figure 401	R WING INBOARD	LE SLATS - EXTEND FULLY AND DEACTIVATE (TASK 27-81-00-860-803 and TASK 27-81-00-040-801) - ACTIVATE AND RETRACT (TASK 27-81-00-860-804 and TASK 27-81-00-440-801) ECS ACCESS DOOR, 192CR RAM AIR INLET LIP PANEL, 191HR FORWARD WING TO BODY FAIRING PANEL, 191FR INBOARD LEADING EDGE, REMOVABLE ACCESS PANEL, 611AB
		M269	element [17]	Figure 401	R WING OUTBOARD	LE SLATS - EXTEND FULLY AND DEACTIVATE (TASK 27-81-00-860-803 and TASK 27-81-00-040-801) - ACTIVATE AND RETRACT (TASK 27-81-00-860-804 and TASK 27-81-00-440-801) ECS ACCESS DOOR, 192CR RAM AIR INLET LIP PANEL, 191HR FORWARD WING TO BODY FAIRING PANEL, 191FR INBOARD LEADING EDGE, REMOVABLE ACCESS PANEL, 611AB
		M1763	element [18]	Figure 404	R FWD STRUT	FORWARD STRUT FAIRING, 441AT FORWARD STRUT FAIRING, 441BT
		M1764	element [30]	Figure 405	R AFT STRUT	OUTBOARD LEADING EDGE BLOWOUT ACCESS DOOR, 621AB
8	21, 24	M270	element [29]	Figure 406	WHEEL WELL	LANDING GEAR DOWN

SUBTASK 26-18-02-010-002

(4) Remove any airplane parts that are in the way (Table 401).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G. Long Sensor Element - Removal

NOTE: This procedure only applies to the following sensors:

element [15], M356, R FWD A/C PACK
element [16], M370, L WING INBOARD
element [16], M371, R WING INBOARD
element [17], M268, L WING OUTBOARD
element [17], M269, R WING OUTBOARD
element [19], M276, AFT - SECTION 48
element [20], M275, AFT - SECTION 47
element [21], M347, AFT - SECTION 46
element [22], M1147, AFT - SECTION 46
element [23], M348, AFT - SECTION 46
element [24], M273, AFT KEELBEAM
element [25], M272, FWD KEELBEAM
element [28], M355, L FWD A/C PACK
element [29], M270, WHEEL WELL.

SUBTASK 26-18-02-020-001

(1) Loosen all the bolts [6] securing the mounting clips [4] that hold the sensor element in its position.

SUBTASK 26-18-02-020-002

(2) Remove the sensor element from all the mounting clips [4].

SUBTASK 26-18-02-020-015

(3) Remove the grommet [5] from the sensor element.

NOTE: Keep the grommet to reuse during installation procedure.

SUBTASK 26-18-02-020-003

(4) For each sensor element in the wing and lower aft body, do these steps to disconnect the connector [3] at one end of the sensor element:

(a) Remove the lockwires [1] from the jamnut [2].

(b) If it is necessary, disconnect the coupling element connector or electrical connector and remove the jamnut [2].

(c) Disconnect the connector [3].

(d) Put covers on the open end of the connectors [3] with caps to prevent damage.

SUBTASK 26-18-02-020-016

(5) For each sensor element in the main wheel well, do these steps to disconnect the connector [3] at one end of the sensor element:

LOM 402, 404, 406 PRE SB 737-26-1124; AIRPLANES WITHOUT MAIN WHEEL WELL CORROSION PROTECTION

(a) Remove the lockwire [1] (MS20995NC32 lockwire, G50347) from the jamnut [2].

(b) Loosen the jamnut [2].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-999; LOM 402, 404, 406 POST SB 737-26-1124; AIRPLANES WITH MAIN WHEEL WELL CORROSION PROTECTION

(c) Remove the nut [8], two washers [9], and bolt [11] from the terminal lug [10].

(d) Remove the lockwire [1] (MS20995NC32 lockwire, G50347) from the connector hex nut [2].

(e) Loosen the connector hex nut [2].

LOM ALL

(f) Put covers on the open end of the connector [3] with caps to prevent damage.

SUBTASK 26-18-02-020-004

(6) Hold the sensor element carefully to keep it in its position and to prevent bends.

SUBTASK 26-18-02-020-005

(7) For each sensor element in the wing and lower aft body, do these steps to disconnect the connector [3] at the other end of the element:

(a) Remove the lockwires [1] from the jamnut [2].

(b) If it is necessary, disconnect the coupling element connector or electrical connector and remove the jamnut [2].

(c) Disconnect the connector [3].

(d) Put covers on the open end of the connector [3] with tape or caps to prevent damage.

SUBTASK 26-18-02-020-017

(8) For each sensor element in the main wheel well, do these steps to disconnect the connector [3] at the other end of the sensor element:

LOM 402, 404, 406 PRE SB 737-26-1124; AIRPLANES WITHOUT MAIN WHEEL WELL CORROSION PROTECTION

(a) Remove the lockwire [1] (MS20995NC32 lockwire, G50347) from the jamnut [2].

(b) Loosen the jamnut [2].

LOM 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-999; LOM 402, 404, 406 POST SB 737-26-1124; AIRPLANES WITH MAIN WHEEL WELL CORROSION PROTECTION

(c) Remove the nut [8], two washers [9], and bolt [11] from the terminal lug [10].

(d) Remove the lockwire [1] (MS20995NC32 lockwire, G50347) from the connector hex nut [2].

(e) Loosen the connector hex nut [2].

LOM ALL

(f) Put covers on the open end of the connector [3] with tape or caps to prevent damage.

SUBTASK 26-18-02-020-006

(9) For each sensor element on the aft keel beam, do these steps:

(a) Tie a cord to the forward end of the sensor element.

1) Make sure that the cord is longer than the sensor element.

(b) Slowly pull the sensor element aft through the keel beam.

1) Use the access holes below the keel beam to help guide the sensor element through the holes in the structure.

(c) Remove the sensor element from the cord and leave the cord in its position inside the keel beam.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-18-02-550-001

(10) Carefully roll the sensor element into a 6 in. (15.2 cm) diameter coil.

(a) Use tape if it is necessary.

H. Looped Sensor Element - Removal

NOTE: This procedure only applies to the following sensors:

element [13], M1912, R AFT A/C PACK

element [14], M1910, R MID A/C PACK

element [18], M1763, R FWD STRUT

element [18], M1761, L STRUT FWD

element [30], M1762, L STRUT AFT

element [30], M1764, R AFT STRUT

element [26], M1911, L AFT A/C PACK

element [27], M1909, L MID A/C PACK.

SUBTASK 26-18-02-020-019

(1) If necessary, remove the bracket when removing the element [18], M1763, R FWD STRUT or element [18], M1761, L STRUT FWD.

SUBTASK 26-18-02-020-007

(2) Remove the nut [8], two washers [9], and bolt [11] that secure each lead to the terminal lug [10].

SUBTASK 26-18-02-020-020

(3) Remove the jumper from the bracket [12].

(a) For the Air Conditioning (A/C) pack locations, remove the screw [43], washers [32], and nut [51].

(b) For the forward strut locations, remove the nut [33] and washer [34] from the jumpers [47].

(c) For the aft strut locations, remove the screw [50], washers [48], and nut [49] from the jumper [46].

SUBTASK 26-18-02-020-013

(4) For the strut locations, release the elements from the clamps [35].

(a) Open the clamp [35] to free the element.

(b) Remove the grommet [5] from the element.

NOTE: Keep the grommet for the installation procedure.

SUBTASK 26-18-02-020-021

(5) Remove the bracket [12] with the element.

(a) For the A/C pack locations, remove the screws [36] and washers [37].

(b) For the forward strut locations, remove the bolts [38] and washers [39].

(c) For the aft strut locations, remove the screws [44] and washers [45].

SUBTASK 26-18-02-020-022

(6) Place the bracket [12] with the element on a clean work surface.

SUBTASK 26-18-02-020-023

(7) Release the element from the clamp [35] on the bracket [12].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) Open the clamp [35] to free the element.

(b) Remove the grommet [5] from the element.

NOTE: Keep the grommet for the installation procedure.

SUBTASK 26-18-02-020-009

(8) Remove the lockwire from the jamnuts [2] (TASK 20-10-44-000-801).

SUBTASK 26-18-02-020-018

(9) Remove the jamnut [2] securing each connector [3] to the bracket [12].

SUBTASK 26-18-02-020-010

(10) Remove the sensor element from the bracket [12].

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F42426 S0006568215_V2

Wing Overheat Detectors Installation
Figure 401/26-18-02-990-801 (Sheet 1 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2567841 S0000614705_V1

Wing Overheat Detectors Installation
Figure 401/26-18-02-990-801 (Sheet 2 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Wing Overheat Detectors Installation
Figure 401/26-18-02-990-801 (Sheet 3 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Wing Overheat Detectors Installation
Figure 401/26-18-02-990-801 (Sheet 4 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F52279 S0006568217_V5

Wing Overheat Detectors Installation
Figure 401/26-18-02-990-801 (Sheet 5 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F50874 S0006568218_V6

Wing Overheat Detectors Installation
Figure 401/26-18-02-990-801 (Sheet 6 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F48917 S0006568219_V2

A/C Pack Overheat Detectors Installation
Figure 402/26-18-02-990-802 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ELEMENT CONNECTION (EXAMPLE)

C

CLAMP (EXAMPLE, 7 LOCATIONS)

D

CLAMP (EXAMPLE, 5 LOCATIONS)

E

F50834 S0006568220_V6

A/C Pack Overheat Detectors Installation
Figure 402/26-18-02-990-802 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F52954 S0006568221_V7

Mid and Aft A/C Pack Overheat Detectors Installation
Figure 403/26-18-02-990-803

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2419654 S0000558986_V2

Strut Overheat Detectors Installation
Figure 404/26-18-02-990-804 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2567891 S0000614716_V4

Strut Overheat Detectors Installation
Figure 404/26-18-02-990-804 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Aft Strut Overheat Detectors Installation
Figure 405/26-18-02-990-812 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Aft Strut Overheat Detectors Installation
Figure 405/26-18-02-990-812 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G64963 S0006568223_V4

Wheel Well Overheat Detection Sensing Element Installation
Figure 406/26-18-02-990-806 (Sheet 1 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2567895 S0000614723_V1

Wheel Well Overheat Detection Sensing Element Installation
Figure 406/26-18-02-990-806 (Sheet 2 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

B

(EXAMPLE)

C

G64964 S0006568224_V6

Wheel Well Overheat Detection Sensing Element Installation
Figure 406/26-18-02-990-806 (Sheet 3 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

B

(EXAMPLE)

C

U34037 S0000192976_V6

Wheel Well Overheat Detection Sensing Element Installation
Figure 406/26-18-02-990-806 (Sheet 4 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Aft Cargo Overheat Detectors Installation
Figure 407/26-18-02-990-807

ECCN 9E991 BOEING PROPRIETARY - See title page for details

H10120 S0006568226_V6

Keel Beam Overheat Detectors Installation
Figure 408/26-18-02-990-808

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CLAMP (EXAMPLE)

3068209 S0000829503_V1

Grommet Installation
Figure 409/26-18-02-990-809

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-18-02-400-801

3. Wheel Well, Wing and Lower Aft Body Overheat Sensor Element - Installation

(Figure 401, Figure 402, Figure 403, Figure 404, Figure 406, Figure 407, Figure 408, Figure 409)

A. General

(1) This task gives instructions to install the Wheel Well, Wing and Lower Aft Body Overheat Sensor Element.

B. References

Reference	Title
06-41-00-800-801	Finding an Access Door or Panel on the Lower Half of the Fuselage (P/B 201)
20-10-44-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
20-40-11-760-801	Electrical Bonding (P/B 201)
26-18-00-710-801	Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test (P/B 501)
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES
SWPM 20-60-03	Special Protection of Electrical Connectors

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-614	Bonding Meters - Non-Intrinsically Safe (For use in outside Class I, Divisions I & II non-hazardous locations. For hazardous locations, use COM-1550). Part #: 247000 Supplier: 00426 Part #: 620LK Supplier: 1CRL2 Part #: BLR-0003-XX Supplier: KC432 Part #: BT51 Supplier: 00426 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659 Opt Part #: 247001 Supplier: 00426

D. Consumable Materials

Reference	Description	Specification
A00160	Sealant - Firewall - Hydraulic Fluid Resistant	BMS5-63
A00230	Compound - Electrical Insulating Coating	BMS5-37
A00767	Sealant - Fuel Tank	BMS5-45
A50231	Sealant - Pressure And Environmental - Chromate Type	BMS5-95 Class B
A50337	Sealant - Fuel Tank	BMS5-45 Class B
A50359	Sealant - Low Density, Non-Chromate Type	BMS5-142 Type II Class B
B00130	Alcohol - Isopropyl	TT-I-735
B00316	Solvent - Aliphatic Naphtha (For Organic Coatings)	TT-N-95 Type I, ASTM D-3735 Type I

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Reference	Description	Specification
B50078	Solvent - Aliphatic Naphtha (For Organic Coatings)	TT-N-95 Type I (Supersedes BMS3-2 Type I)
B50079	Solvent - Aliphatic Naphtha (For Acrylic Plastics)	TT-N-95 Type II (Supersedes BMS3-2 Type II)
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)
G50262	Wiper - Cleaning	BMS15-5
G50347	Lockwire - MS20995NC32, Monel - 0.032 Inch (0.8128 mm) Diameter	NASM20995
G50470	Compound - Electrical Insulating (Dow Corning 4)	SAE AS8660 (Supersedes MIL-S-8660)

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
13	Element	26-18-01-03A-050	LOM ALL
14	Element	26-18-01-05-050	LOM ALL
15	Element	26-18-02-13A-045	LOM 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-999
		26-18-02-13B-040	LOM 402, 404, 406
16	Element	26-18-51-01A-055	LOM ALL
17	Element	26-18-02-10A-035	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-424
		26-18-02-10B-045	LOM 425-434, 437-447, 450-999
18	Element	26-18-02-15-075	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-424
		26-18-02-16-070	LOM 425-434, 437-447, 450-999
19	Element	26-18-01-09A-025	LOM ALL
		26-18-02-09A-025	LOM ALL
20	Element	26-18-02-01-010	LOM ALL
21	Element	26-18-02-01-015	LOM ALL
22	Element	26-18-02-03-050	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420
		26-18-02-03A-070	LOM 422-434, 437-447, 450-999

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

AMM Item	Description	AIPC Reference	AIPC Effectivity
23	Element	26-18-02-03-055	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420
		26-18-02-03A-075	LOM 422-434, 437-447, 450-999
24	Element	26-18-02-09A-025	LOM ALL
25	Element	26-18-02-07A-030	LOM ALL
26	Element	26-18-01-03A-050	LOM ALL
27	Element	26-18-01-05-050	LOM ALL
28	Element	26-18-02-13-045	LOM ALL
29	Element	26-18-02-11-100	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-424
		26-18-02-11B-125	LOM 425-434, 437-447, 450-464
		26-18-02-11C-135	LOM 465-999
30	Element	26-18-01-01A-080	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-424
		26-18-01-04-060	LOM 425-434, 437-447, 450-999
		26-18-02-15-075	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-424

F. Location Zones

Zone	Area
129	Keel Beam (Part) Body Station 501.70 to Body Station 540.00
131	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Left
132	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
139	Keel Beam, (Part) Body Station 540.00 to Body Station 727.00
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right
149	Keel Beam (Part) Body Station 727.00 to Body Station 743.95
191	Lower Wing-To-Body Fairing - Forward of Wing Box
192	Lower Wing-To-Body Fairing - Under Wing Box
311	Area Aft of Pressure Bulkhead - Left
431	Engine 1 - Forward Strut Fairing
441	Engine 2 - Forward Strut Fairing
511	Left Wing - Leading Edge To Front Spar
521	Left Wing - Leading Edge to Front Spar
611	Right Wing - Leading Edge to Front Spar
621	Right Wing - Leading Edge to Front Spar

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G. Access Panels

Number	Name/Location
191FL	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191FR	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191HL	Ram Air Inlet Lip Panel - Forward
191HR	Ram Air Inlet Lip Panel - Forward
192CL	ECS Access Door
192CR	ECS Access Door
192DR	ECS High Pressure Access Door
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BT	Forward Strut Fairing, Pressure Relief Door, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BT	Forward Strut Fairing, Pressure Relief Door, Strut 2
511AB	Inboard Leading Edge, Lower Removable Panel
521AB	Outboard Leading Edge Blowout Door - Slat Station 20.04
611AB	Inboard Leading Edge, Lower Removable Access Panel
621AB	Outboard Leading Edge Blowout Door - Slat Station 20.04

H. Prepare for the Installation

SUBTASK 26-18-02-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

SUBTASK 26-18-02-010-003

(2) Make sure that the applicable access doors and panels are open as shown in Table 401 (TASK 26-18-02-000-801).

SUBTASK 26-18-02-010-004

(3) Make sure that you remove the airplane parts that are in the way as shown in Table 401 (TASK 26-18-02-000-801).

I. Long Sensor Element - Installation

NOTE: This procedure only applies to the following sensors:

element [15], M356, R FWD A/C PACK
element [16], M370, L WING INBOARD
element [16], M371, R WING INBOARD
element [17], M268, L WING OUTBOARD
element [17], M269, R WING OUTBOARD
element [19], M276, AFT - SECTION 48
element [20], M275, AFT - SECTION 47
element [21], M347, AFT - SECTION 46
element [22], M1147, AFT - SECTION 46
element [23], M348, AFT - SECTION 46

ECCN 9E991 BOEING PROPRIETARY - See title page for details

element [24], M273, AFT KEELBEAM

element [25], M272, FWD KEELBEAM

element [28], M355, L FWD A/C PACK

element [29], M270, WHEEL WELL.

SUBTASK 26-18-02-420-001

CAUTION	WHEN YOU INSTALL THE ELEMENT, DO NOT BEND THE ELEMENT TO A RADIUS THAT IS LESS THAN 1 IN. (25.4 MM.). DO NOT LET A BEND IN 1 IN. (25.4 MM.) DISTANCE FROM THE EDGE OF THE QUICK-RELEASE CLAMP OR THE FLANGE ASSEMBLY. CONTOUR THE ELEMENT TO CLEAR ADJACENT PARTS AND STRUCTURES. HAVE THE ELEMENT LENGTH EQUALLY BETWEEN CLAMPS. IF THE BEND RADIUS IS LESS THAN ONE INCH, DAMAGE TO THE ELEMENT CAN OCCUR.

CAUTION	DO NOT TURN, PULL, OR ATTACH THE SENSING ELEMENT WITH A CLAMP. DO NOT MAKE SERVICEABLE KINKS, BENDS, OR DENTS STRAIGHT. IF YOU MAKE SERVICEABLE KINKS, BENDS, OR DENTS STRAIGHT, DAMAGE TO THE SENSING ELEMENT CAN OCCUR.

(1) Carefully put the element into position.

NOTE: This step will require two people.

(a) Carefully unwind the element and make sure that there are no kinks.

(b) Carefully bend the element to fit into its approximate position.

(c) Carefully put and hold the element in its position.

(d) Do these steps for the sensor elements on the aft keel beam:

1) Tie the existing cord to the aft end of the new element.

2) Slowly pull the forward through the keel beam.

a) Use the access holes below the keel beam to help guide the element through the holes in the structure.

3) Remove the cord from the element.

SUBTASK 26-18-02-420-024

(2) Remove the caps from the end fittings of the electrical connectors [3].

SUBTASK 26-18-02-420-025

WARNING	DO THE STEPS BELOW IF THE AIRPLANE OPERATES WHERE DEICING FLUID THAT CONTAINS POTASSIUM FORMATE OR POTASSIUM ACETATE IS USED. ALSO, DO THE STEPS FOR ALL AIRPLANES THAT YOU FOUND CORROSION IN THE ELECTRICAL CONNECTORS IN THE MAIN WHEEL WELL. THE ELECTRICAL CONNECTORS ARE IN A SYSTEM THAT IS NECESSARY FOR SAFE FLIGHT.

(3) Examine the connector [3] at each end of the heat detector for corrosion.

(a) If corrosion is present, replace the element.

SUBTASK 26-18-02-420-026

(4) Put the covers on the open end of the connectors [3] with caps to prevent damage.

SUBTASK 26-18-02-420-011

(5) Install the element into each of the mounting clips [4].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) Install the grommet [5] around the element so that each grommet [5] is in the center of the mounting clip [4].

(b) Install the grommets [5] into the mounting clips [4] so that the grommet slit is at 90±20 degrees from the clamp opening and hinge centerline (Figure 409).

1) Make sure that the grommet slit is visible and not facing adjacent structure.

2) Make sure that the element does not contact the mounting clips [4].

3) Make sure that the mounting clips [4] and grommets [5] are attached to the element tightly.

a) If the used sensor element is in its position as a reference, remove it.

(c) Locate element in approximate installation position and temporarily support as necessary to maintain position.

(d) Tighten the bolt [6] to secure the mounting clip [4].

LOM 402, 404, 406, 407, 411

(e) For the Bulkhead zone, make sure that the minimum clearance is as follows:

1) 0.25 in. (6.35 mm) between the sensor element and structure, except at the mounting clips [4].

2) 0.50 in. (12.70 mm) between the sensor element and other systems, except at the mounting clips [4].

3) 1.5 in. (38.10 mm) between the sensor element and duct.

LOM ALL

(f) For the other zones, make sure that the minimum clearance is as follows:

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-464

1) 0.25 in. (6.35 mm) between the sensor element and structure, except at the mounting clips [4].

2) 0.25 in. (6.35 mm) between the sensor element and other systems, except at the mounting clips [4].

3) 1.5 in. (38.10 mm) between the sensor element and duct.

LOM 465-999

4) 0.25 in. (6.35 mm) between the sensor element and structure, except at the mounting clips [4].

5) 0.50 in. (12.70 mm) between the sensor element and other systems, except at the mounting clips [4].

6) 3 in. (76.20 mm) between the element and duct.

LOM ALL

(g) Make sure that the minimum clearance between the sensor elements is 0.50 in. (12.70 mm).

SUBTASK 26-18-02-420-002

(6) Remove the caps from the end fittings to connect the connectors [3].

SUBTASK 26-18-02-420-022

(7) Make sure that the connectors [3] have ceramic inserts on both ends.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-18-02-420-023

(8) If it is applicable, make sure that the pins on the connectors [3] are centered, not bent, recessed, or damaged.

SUBTASK 26-18-02-100-002

(9) Clean the mating surfaces of the connectors [3], element, and structure (SWPM 20-20-00).

(a) Use a cotton wiper, G00034, made moist with alcohol, B00130.

(b) Immediately dry the surfaces with a new cotton wiper.

LOM 402, 404, 406 PRE SB 737-26-1124

SUBTASK 26-18-02-390-001

(10) For the M270 sensor, apply Compound, G50470, to the internal components of the connectors [3] and the ends of the element (SWPM 20-60-03).

LOM ALL

SUBTASK 26-18-02-420-003

(11) For each sensor element in the wing and lower aft body, do these steps to connect the connector [3]:

(a) Attach the connector [3].

(b) If it was removed, install the jamnut [2] and tighten to 50 in-lb (5.6 N·m) - 60 in-lb (6.8 N·m).

(c) If it was disconnected, connect the coupling element connector or electrical connector.

(d) Install lockwires [1] on the jamnut [2] as follows:

NOTE: Lockwire diameter must fill between 1/3 and 3/4 of the hole diameter. 0.032 in. (0.81 mm) minimum diameter, except for lockwire. 0.020 in. (0.51 mm) diameter can be used, if the lockwire hole is 0.045 in. (1.14 mm) diameter or smaller, or the spacing between parts is less than 2 in. (50.80 mm) and the lockwire hole diameter is between 0.045 in. (1.14 mm) - 0.062 in. (1.57 mm) diameter.

1) Install a MS20995NC32 lockwire, G50347, on the jamnut [2] and connector [3].

2) If it is necessary, install a MS20995NC32 lockwire, G50347, on the jamnut [2] and coupling element connector or electrical connector.

3) Obtain adequate tension without overstressing the lockwire [1] (MS20995NC32 lockwire, G50347), apply the number of twists per inch of lockwire as in Table 402.

Table 402/26-18-02-993-809 TWISTS PER INCH

RANGE OF WIRE DIAMETERS (IN)	LESS THAN 0.019	0.019 TO 0.026	0.027 TO 0.042	0.043 TO 0.065	MORE THAN 0.065
Twists per inch	11 to 14	9 to 12	7 to 10	5 to 8	4 to 7

SUBTASK 26-18-02-420-029

(12) For each sensor element in the main wheel well, do these steps to connect the connector [3].

(a) Attach the connector connector [3].

LOM 402, 404, 406 PRE SB 737-26-1124

(b) Tighten the jamnuts [2] on the end fittings to 50 in-lb (5.6 N·m) - 60 in-lb (6.8 N·m).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-999; LOM 402, 404, 406 POST SB 737-26-1124

(c) Tighten the connector hex nuts [2] on the end fittings to 50 in-lb (5.6 N·m) - 60 in-lb (6.8 N·m).

LOM ALL

(d) Install a lockwire [1] on the coupling as follows:

NOTE: Lockwire diameter must fill between 1/3 and 3/4 of the hole diameter. 0.032 in. (0.81 mm) minimum diameter, except for lockwire. 0.020 in. (0.51 mm) diameter can be used, if the lockwire hole is 0.045 in. (1.14 mm) diameter or smaller, or the spacing between parts is less than 2 in. (50.8 mm) and the lockwire hole diameter is between 0.045 in. (1.14 mm) - 0.062 in. (1.57 mm) diameter.

1) Install a MS20995NC32 lockwire, G50347, on the jamnut [2] and connector [3].

2) Install a MS20995NC32 lockwire, G50347, on the jamnut [2] and coupling element connector or electrical connector.

3) Obtain adequate tension without overstressing the lockwire [1] (MS20995NC32 lockwire, G50347), apply the number of twists per inch of lockwire as in Table 402.

SUBTASK 26-18-02-820-001

(13) Measure the electrical bonding resistance between the connector of the sensor and airplane structure (SWPM 20-20-00).

(a) Use a non-intrinsically safe bonding meter, COM-614.

(b) Make sure that the electrical bonding resistance is 0.005 ohms (5 milliohms) or less.

SUBTASK 26-18-02-820-002

(14) Apply a fillet seal to all edges of the mating surfaces between the bracket and M270 sensor with sealant, A50359, sealant, A50337, or sealant, A50231 (SWPM 20-20-00).

LOM 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-999; LOM 402, 404, 406 POST SB 737-26-1124

SUBTASK 26-18-02-420-019

(15) Do these steps for the sensing elements in the main wheel well:

(a) Clean the terminal lug [10], nut [8], washers [9], and bolt [11] with aliphatic naphtha, B50079, or aliphatic naphtha, B50078, or solvent, B00316, and wiper, G50262.

(b) Attach the terminal lug [10] with the nut [8], two washers [9], and bolt [11].

(c) Tighten the bolt [11] to 25 in-lb (2.8 N·m) - 35 in-lb (4.0 N·m).

(d) Apply compound, A00230, to cover the connection between the lead and the terminal lug [10].

LOM ALL

SUBTASK 26-18-02-860-004

(16) Only the M270 sensor requires application of sealant, A50359, sealant, A50337, or sealant, A50231.

J. Looped Sensor Element - Installation

NOTE: This procedure only applies to the following sensors:

element [13], M1912, R AFT A/C PACK

element [14], M1910, R MID A/C PACK

element [18], M1763, R FWD STRUT

ECCN 9E991 BOEING PROPRIETARY - See title page for details

element [18], M1761, L STRUT FWD

element [30], M1762, L STRUT AFT

element [30], M1764, R AFT STRUT

element [26], M1911, L AFT A/C PACK

element [27], M1909, L MID A/C PACK.

SUBTASK 26-18-02-100-001

(1) Clean the mating surfaces of the bracket [12] and element (SWPM 20-20-00).

(a) Use a cotton wiper, G00034, made moist with alcohol, B00130.

(b) Immediately dry the surfaces with a new cotton wiper.

SUBTASK 26-18-02-420-005

CAUTION	WHEN YOU INSTALL THE ELEMENT, DO NOT BEND THE ELEMENT TO A RADIUS THAT IS LESS THAN 1 IN. (25.4 MM.). DO NOT LET A BEND IN 1 IN. (25.4 MM.) DISTANCE FROM THE EDGE OF THE QUICK-RELEASE CLAMP OR THE FLANGE ASSEMBLY. CONTOUR THE ELEMENT TO CLEAR ADJACENT PARTS AND STRUCTURES. HAVE THE ELEMENT LENGTH EQUALLY BETWEEN CLAMPS. IF THE BEND RADIUS IS LESS THAN ONE INCH, DAMAGE TO THE ELEMENT CAN OCCUR.

CAUTION	DO NOT TURN, PULL, OR ATTACH THE SENSING ELEMENT WITH A CLAMP. DO NOT MAKE SERVICEABLE KINKS, BENDS, OR DENTS STRAIGHT. IF YOU MAKE SERVICEABLE KINKS, BENDS, OR DENTS STRAIGHT, DAMAGE TO THE SENSING ELEMENT CAN OCCUR.

(2) Position the element in the bracket [12] and clamps [35].

NOTE: Make sure that the element is routed straight inside the clamps and minimum clearance is maintained as follow: 0.25 inches between the detector and adjacent structure or other systems; 1.5 inches between the detector and ducts.

SUBTASK 26-18-02-390-003

(3) For M1762 and M1764, apply a fay seal between the bracket and sensors with sealant, A50359, sealant, A50337, or sealant, A50231 (SWPM 20-20-00).

SUBTASK 26-18-02-420-006

(4) Secure each terminal lug [10] with jamnut [2].

(a) Do this step for the sensor elements M1909, M1910, M1911, M1912, M1762, and M1764:

1) Tighten the jamnut [2] to 80 in-lb (9.0 N·m) - 100 in-lb (11.3 N·m).

(b) Do this step for the sensor elements M1761 and M1763:

1) Tighten the jamnut [2] to 50 in-lb (5.6 N·m) - 60 in-lb (6.8 N·m).

(c) Measure the electrical bonding resistance between the detector element sensors and bracket for M1909, M1910, M1911, M1912, M1762, and M1764 sensors (TASK 20-40-11-760-801).

1) Use a non-intrinsically safe bonding meter, COM-614.

2) Make sure that the electrical bonding resistance is 0.005 ohms (5 milliohms) or less.

(d) Measure the electrical bonding resistance between the detector element sensors and bracket for M1761 and M1763 sensors (TASK 20-40-11-760-801).

1) Use a non-intrinsically safe bonding meter, COM-614.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2) Make sure that the electrical bonding resistance is 0.010 ohms (10 milliohms) or less.

(e) Install a MS20995NC32 lockwire, G50347 on the jamnuts [2], do this task: Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-44-400-801.

SUBTASK 26-18-02-420-007

(5) Install the element in the clamp [35] on the bracket [12].

(a) Install the grommet [5] on the element so that the grommet slit is at 90±20 degrees from the clamp opening and hinge centerline (Figure 409).

(b) Make sure that the grommet slit is visible and not facing adjacent structure.

(c) Make sure that the element does not contact the mounting clip.

(d) Secure the clamp [35].

SUBTASK 26-18-02-420-021

(6) Place the assembled bracket [12] and element in position.

(a) For the A/C pack locations, secure with screws [36] and washers [37].

(b) For the forward strut locations, secure with bolts [38] and washers [39].

(c) For the aft strut locations, secure with screws [44] and washers [45].

LOM 425-434, 437-447, 450-999; LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-424 POST SB 737-26-1131

SUBTASK 26-18-02-420-027

(7) For the forward strut locations, secure the element to the clamps [35].

(a) Install the grommets [5] on the element so that the grommet slit is at 90±20 degrees from the clamp opening and hinge centerline (Figure 409).

(b) Make sure that the grommet slit is visible and not facing adjacent structure.

(c) Make sure that the element does not contact the mounting clip.

(d) Secure the clamps [35].

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-424 PRE SB 737-26-1131

SUBTASK 26-18-02-420-031

(8) For the forward strut locations, secure the element to the clamp [35].

(a) Install the grommet [5] on the element so that the grommet slit is at 90±20 degrees from the clamp opening and hinge centerline (Figure 409).

(b) Make sure that the grommet slit is visible and not facing adjacent structure.

(c) Make sure that the element does not contact the mounting clip.

(d) Secure the clamp [35].

LOM 425-434, 437-447, 450-999; LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-424 POST SB 737-26-1131

SUBTASK 26-18-02-420-028

(9) For the aft strut locations, secure the element to the clamps [35].

(a) Install the grommets [5] on the element so that the grommet slit is at 90±20 degrees from the clamp opening and hinge centerline (Figure 409).

(b) Make sure that the grommet slit is visible and not facing adjacent structure.

(c) Make sure that the element does not contact the mounting clip.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(d) Secure the clamps [35].

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-424 PRE SB 737-26-1131

SUBTASK 26-18-02-420-032

(10) For the aft strut locations, secure the element to the clamp [35].

(a) Install the grommet [5] on the element so that the grommet slit is at 90±20 degrees from the clamp opening and hinge centerline (Figure 409).

(b) Make sure that the grommet slit is visible and not facing adjacent structure.

(c) Make sure that the element does not contact the mounting clip.

(d) Secure the clamp [35].

LOM ALL

SUBTASK 26-18-02-914-001

(11) Attach the jumper to the bracket [12].

(a) For the A/C pack locations, secure the jumper [42] with screw [43], washers [32], and nut [51].

(b) For the forward strut locations, secure the jumpers [47] with nut [33] and washer [34].

(c) For the aft strut locations, secure the jumper [46] with screw [50], washers [48], and nut [49].

SUBTASK 26-18-02-820-003

(12) Attach each terminal lug [10] to its corresponding lead and secure with a bolt [11], washers [9], and nut [8].

(a) Tighten nut [8].

SUBTASK 26-18-02-820-005

(13) Measure the electrical bonding resistance between airplane structure and M1909, M1910, M1911, M1912, M1762, M1764, M1761, and M1763 sensors.

(a) Use a non-intrinsically safe bonding meter, COM-614.

(b) Make sure that the electrical bonding resistance is 0.010 ohms (10 milliohms) or less.

SUBTASK 26-18-02-820-006

(14) Apply compound, A00230, or sealant, A00767, to the terminal of the overheat loop sensor.

(a) Make sure that the sealant covers all exposed metal from the insulator to the wiring.

NOTE: The sealant should not bridge the insulator.

SUBTASK 26-18-02-390-004

(15) Apply a fillet seal between the bracket [12] and jamnut [2] for M1761 and M1763 sensors with sealant, A00160 (SWPM 20-20-00).

K. Wheel Well, Wing and Lower Aft Body Overheat Sensor Element Installation Test

SUBTASK 26-18-02-860-003

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

SUBTASK 26-18-02-420-010

(2) Do this task: Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test, TASK 26-18-00-710-801.

L. Put the Airplane Back to Its Usual Condition

SUBTASK 26-18-02-410-001

(1) Close these access panels:

Number	Name/Location
511AB	Inboard Leading Edge, Lower Removable Panel
611AB	Inboard Leading Edge, Lower Removable Access Panel

SUBTASK 26-18-02-410-003

(2) Install any airplane parts that were removed (Table 401 , TASK 26-18-02-000-801).

SUBTASK 26-18-02-410-002

(3) Close these access panels:

Number	Name/Location
191FL	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191FR	Forward Wing To Body Fairing Panel - Mid Fairing, Above Ram Air Inlet
191HL	Ram Air Inlet Lip Panel - Forward
191HR	Ram Air Inlet Lip Panel - Forward
192CL	ECS Access Door
431AT	Forward Strut Fairing, Thumbnail Fairing, Strut 1
431BT	Forward Strut Fairing, Pressure Relief Door, Strut 1
441AT	Forward Strut Fairing, Thumbnail Fairing, Strut 2
441BT	Forward Strut Fairing, Pressure Relief Door, Strut 2
521AB	Outboard Leading Edge Blowout Door - Slat Station 20.04
621AB	Outboard Leading Edge Blowout Door - Slat Station 20.04

SUBTASK 26-18-02-410-006

(4) Close these access panels (TASK 06-41-00-800-801):

(a) Close this access panel:

Number	Name/Location
192CR	ECS Access Door

(b) Close this access panel:

Number	Name/Location
192DR	ECS High Pressure Access Door

NOTE: The ECS high pressure access door, 192DR, will not latch in its position if the ECS access door, 192CR, is not closed.

SUBTASK 26-18-02-410-004

(5) Close the applicable access doors and panels (Table 401, TASK 26-18-02-000-801).

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WING, WHEEL WELL, AND LOWER AFT BODY OVERHEAT DETECTION SENSING ELEMENT - ADJUSTMENT/TEST

1. General

A. This procedure contains the test of the sensing elements for the wing, wheel well and lower aft body overheat detection system.

B. Use a wire and fitting between the element and fitting and the test equipment. Attach the test leads to the center contacts or the center contact and the outer shell of the wire end fittings, as applicable. Use the wire end fittings to decrease the possibility of damage to the electrical contact surface and supply a positive attach point for the test equipment. Be careful during the test so that no dirt or other contamination gets on the end fittings. Reconnect the electrical connector or replace the protective caps when you complete the tests.

TASK 26-18-02-720-803

2. Wing, Wheel Well and Lower Aft Body - Overheat Sensing Element Test

A. General

(1) Do a test of each sensing loop only when all of the units in the system are stable at ambient temperature. If you cannot complete the tests that follow on an element, replace the element.

B. References

Reference	Title
20-10-44-400-801	Lockwire, Cotter Pins, and Lockrings - Installation (P/B 401)
24-22-00-860-813	Supply External Power (P/B 201)
24-22-00-860-815	Supply APU Generator Power (P/B 201)
26-18-00-710-801	Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test (P/B 501)
26-18-01-000-801	Compartment Overheat Detection Control Unit Removal (P/B 401)
26-18-01-400-801	Compartment Overheat Detection Control Unit Installation (P/B 401)
36-11-00 P/B 501	ENGINE BLEED AIR DISTRIBUTION SYSTEM - ADJUSTMENT/TEST

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1741	Meter - LCR (Inductance, Capacitance, Resistance; Use COM-20443 for OH bleed loop testing) Part #: 878B Supplier: 08098 Part #: 879B Supplier: 08098 Part #: 880 Supplier: 08098 Part #: U1733P Supplier: 1LQK8 Opt Part #: 875B Supplier: 08098 Opt Part #: 878A Supplier: 08098 Opt Part #: 879 Supplier: 08098

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Reference	Description
COM-20443	Meter - LCR and Z (Inductance, Capacitance, Resistance and Impedance) Part #: 880 Supplier: 08098
SPL-12922	Assembly - Extender Box C26007-3, -73 (included in C26007 Eqpt) Part #: C26007-72 Supplier: 81205 Opt Part #: C26007-1 Supplier: 81205
SPL-14827	Assembly - Test Box, C26007-2 (included in C26007 Eqpt) Part #: C26007-72 Supplier: 81205 Opt Part #: C26007-1 Supplier: 81205

D. Location Zones

Zone	Area
117	Electrical and Electronics Compartment - Left
118	Electrical and Electronics Compartment - Right
129	Keel Beam (Part) Body Station 501.70 to Body Station 540.00
131	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Left
132	Center Section Wing Box, Body Station 540.00 to Body Station 663.75 - Right
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
139	Keel Beam, (Part) Body Station 540.00 to Body Station 727.00
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right
149	Keel Beam (Part) Body Station 727.00 to Body Station 743.95
191	Lower Wing-To-Body Fairing - Forward of Wing Box
192	Lower Wing-To-Body Fairing - Under Wing Box
311	Area Aft of Pressure Bulkhead - Left
431	Engine 1 - Forward Strut Fairing
441	Engine 2 - Forward Strut Fairing
511	Left Wing - Leading Edge To Front Spar
521	Left Wing - Leading Edge to Front Spar
611	Right Wing - Leading Edge to Front Spar
621	Right Wing - Leading Edge to Front Spar

LOM ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300

E. Sensing Element Test (Voltage Measurement)

SUBTASK 26-18-02-480-001

(1) Put the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, or test box assembly, C26007-2, SPL-14827, in place of the M237 (Figure 501).

(a) Adjust the forks, on the Electrical / Electronic (E/E) rack, by rotating the shaft to a position where the forks start to exert pressure on the locking lever.

1) Make sure that the lever is in vertical position when locked and the electrical connector is getting proper contact.

2) Make sure that the plug on the rear of the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, or test box assembly, C26007-2, SPL-14827, is fully engaged with the receptacle on the airplane.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH 2 DIGIT CODM: P/N 35008-307 OR P/N 20-035008-300 (Continued)

SUBTASK 26-18-02-760-001

(2) Make sure that the power to the buses is ON (Supply External Power, TASK 24-22-00-860-813 or Supply APU Generator Power, TASK 24-22-00-860-815).

SUBTASK 26-18-02-860-007

(3) Make sure that no BLEED or PACK is running (ENGINE BLEED AIR DISTRIBUTION SYSTEM - ADJUSTMENT/TEST, PAGEBLOCK 36-11-00/501).

SUBTASK 26-18-02-700-001

(4) Turn the dial on the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, or test box assembly, C26007-2, SPL-14827, to each position and read the voltage.

(a) Make sure that each voltage reading is ≥ 4.1 Volts for Boeing Part No. 10-62187-1 or ≥ 5.1 Volts for Boeing Part No. 10-62187-2.

NOTE: The test is successful if all of the voltage readings are ≥ 4.1 Volts or ≥ 5.1 Volts.

SUBTASK 26-18-02-080-001

(5) Remove the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, or test box assembly, C26007-2, SPL-14827, and install the M237 Line Replaceable Unit (LRU) back into the E/E rack.

SUBTASK 26-18-02-480-002

(6) Readjust the forks when installing the M237.

NOTE: The unique adjustment is required for both the overheat detection module extender box assembly, C26007-3, -73, SPL-12922, or test box assembly, C26007-2, SPL-14827, and the M237 LRU.

LOM ALL

F. Sensing Element Continuity Test (Resistance Measurement)

SUBTASK 26-18-02-860-008

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

SUBTASK 26-18-02-000-001

(2) Remove the compartment overheat detection control unit (TASK 26-18-01-000-801).

SUBTASK 26-18-02-865-005

(3) Disconnect the connectors from the loop.

SUBTASK 26-18-02-865-006

(4) Connect the Inductance, Capacitance, Resistance and Impedance (LCRZ) meter, COM-20443 (preferred), or LCR meter (Inductance, Capacitance, Resistance), COM-1741 (alternate), to the center of the conductor at each end of the loop. This procedure does a test of center conductor continuity.

NOTE: A standard digital voltmeter can be used for the center conductor resistance.

NOTE: If using the Inductance, Capacitance, Resistance and Impedance (LCRZ) meter, COM-20443, or LCR meter (Inductance, Capacitance, Resistance), COM-1741, make sure that the meter is in DCR (DC Resistance) mode.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-18-02-860-015

(5) Set the Inductance, Capacitance, Resistance and Impedance (LCRZ) meter, COM-20443, or LCR meter (Inductance, Capacitance, Resistance), COM-1741, to measure continuity via DCR.

SUBTASK 26-18-02-860-016

(6) Allow reading to stabilize and record reading.

SUBTASK 26-18-02-860-012

(7) Do the check for an open detector or circuit:

(a) Compare the values from the reading to the values from Table 501:

Table 501/26-18-02-993-810 Sensing Loop Test Data

FENWAL ALARM/FAULT CODES	LOOP CONNECTOR/PINS		LOOP CENTER CONDUCTOR RESISTANCE (< 130 ° F)	SENSORS
42 (zone 4, loop 4)	D742, pin 13	D742, pin 27	< 20 ohms	M276, M275, M347, M1147, M348
12 (zone 1, loop 1)	D742, pin 4	D742, pin 12	< 15 ohms	M370, M268, M1761, M1762
22 (zone 2, loop 2)	D742, pin 2	D742, pin 8	< 15 ohms	M1911, M1909, M355
32 (zone 3, loop 3)	D742, pin 9	D742, pin 29	< 15 ohms	M272, M273
62 (zone 6, loop 6)	D742, pin 10	D742, pin 11	< 20 ohms	M1763, M1764, M269, M371, M356, M1910, M1912
N/A (wheel well, loop 8)	D742, pin 21	D742, pin 24	< 15 ohms	M270

(b) If the reading is greater than the values shown in Table 501, do the continuity checks of the applicable loop segments to isolate to the failed loop or wiring.

(c) Replace the faulty detector or repair the wiring, as needed.

SUBTASK 26-18-02-400-001

(8) Install the compartment overheat detection control unit (TASK 26-18-01-400-801).

SUBTASK 26-18-02-860-009

(9) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

G. Sensing Element Pin to Case Test (Resistance Measurement)

SUBTASK 26-18-02-860-014

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

SUBTASK 26-18-02-720-002

(2) Disconnect the connectors from both ends of the sensors.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-18-02-720-001

(3) Connect the Inductance, Capacitance, Resistance and Impedance (LCRZ) meter, COM-20443 (preferred), or LCR meter (Inductance, Capacitance, Resistance), COM-1741 (alternate), to the center of the conductor and to the sheath of the sensor tube.

SUBTASK 26-18-02-860-013

(4) Set the Inductance, Capacitance, Resistance and Impedance (LCRZ) meter, COM-20443 or LCR meter (Inductance, Capacitance, Resistance), COM-1741 to R-mode (AC Resistance), parallel mode, and 1KHz.

NOTE: Do not use a Digital Multi Meter (DMM) for center conductor to outer case resistance checks on individual sensors. The data below is for LRU only.

NOTE: For individual sensing elements, continuity (center conductor to center conductor) can be measured using a standard digital voltmeter, or using DCR mode on Inductance, Capacitance, Resistance and Impedance (LCRZ) meter, COM-20443 or LCR meter (Inductance, Capacitance, Resistance), COM-1741.

(a) Measure the resistance from the center of the conductor to the case ground (outer side of the element). Reference Table 502.

NOTE: Conductance equals 1/resistance.

Table 502/26-18-02-993-811 Sensing Element Conductance and Resistance Center Conductor to Case Test Data

SENSOR	SENSOR PART NO.	MAXIMUM CONDUCTANCE, MICRO-SIEMENS*[1]	MINIMUM RESISTANCE, (MEGOHMS) *[1]	MAXIMUM CONTINUITY, (MILLIOHMS)
M371	35574-4-255	0.74	1.35	563.00
M370	35574-4-255	0.74	1.35	563.00
M356	35594-4-255	0.94	1.06	703.00
M355	35594-4-255	0.94	1.06	703.00
M348	35658-4-255	1.58	0.63	1151.00
M347	35646-2-255	1.46	0.68	1067.00
M276	35555-4-255	0.55	1.82	423.00
M275	35575-2-255	0.75	1.33	570.00
	35599-2-255	0.99	1.01	738.00
M273	35555-4-255	0.55	1.82	423.00
M272	35626-4-255	1.26	0.79	927.00
M270	04-90010-110D	1.10	0.91	660.00
	35610-4-400	1.10	0.909	815.00
	35614-4-400	1.14	0.877	843.00
M269	35599-2-255	0.99	1.01	738.00
M268	35599.-2-255	0.99	1.01	738.00
M1912	35712-80 (255)	1.20	0.833	885.00
M1911	35712-80 (255)	1.20	0.833	885.00

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Table 502/26-18-02-993-811 Sensing Element Conductance and Resistance Center Conductor to Case Test Data (Continued)

SENSOR	SENSOR PART NO.	MAXIMUM CONDUCTANCE, MICRO-SIEMENS*[1]	MINIMUM RESISTANCE, (MEGOHMS) *[1]	MAXIMUM CONTINUITY, (MILLIOHMS)
M1910	35712-80 (255)	1.20	0.833	885.00
M1909	35712-80 (255)	1.20	0.833	885.00
M1764	35712-75 (310)	2.24	0.417	820.00
	35712-79 (310)	0.60	1.67	820.00
M1763	35712-79 (310)	0.60	1.67	820.00
M1762	35712-75 (310)	2.24	0.417	820.00
	35712-79 (310)	0.60	1.67	820.00
M1761	35712-79 (310)	0.60	1.67	820.00
M1147	35675-2-255	1.75	0.57	1270.00
M1147	35560-2-255	0.60	1.67	465.00

*[1] from center conductor to ground

SUBTASK 26-18-02-720-003

(5) Connect the connectors to the sensor elements.

SUBTASK 26-18-02-720-004

(6) If applicable, torque the jamnuts to 50 in-lb (6 N·m) - 60 in-lb (7 N·m).

SUBTASK 26-18-02-720-005

(7) If applicable, attach the lockwires to the sensor element connectors (Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-44-400-801).

SUBTASK 26-18-02-720-006

(8) Repeat the sensing element continuity and sensing element pin to case test for each remaining loop.

H. Zone Resistance Test (CODM BITE)

LOM ALL; AIRPLANES WITH CODM P/N 475928-01

SUBTASK 26-18-02-740-001

(1) Do these steps to do the Zone Resistance test (CODM BITE):

(a) Push and release the LOCAL TEST button on the front panel of the CODM (Figure 502).

1) The front panel of the CODM displays CONFIG NEXTGEN1 followed by L WING.

(b) Continue to push and release LOCAL TEST. This will cycle through the different zones followed by LOOP ___ which shows the resistance value in the loop or 2GND_____ which shows the resistance value to ground.

NOTE: If the loops are functioning properly all zones will have a 2GND value of 5000.

(c) Make sure that the resistance value agree with the Table 503 below:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH CODM P/N 475928-01 (Continued)

Table 503/26-18-02-993-812 Zone Resistance Test Data

KIDDE ALARM/FAULT CODES	RESISTANCE VALUE or FAULT MESSAGE	SENSORS
L WING L WING OPEN L WING OVHT L WING SHRT	< 15 Ohms OPEN LOW 0	M370, M268, M1761, M1762
L PACK BAY L PACK BAY OPEN L PACK BAY OVHT L PACK BAY SHRT	< 15 Ohms OPEN LOW 0	M1911, M1909, M355
KEELBEAM KEELBEAM OPEN KEELBEAM OVHT KEELBEAM SHRT	< 15 Ohms OPEN LOW 0	M272, M273
AFT BODY APU AFT BODY APU OPEN AFT BODY APU OVHT AFT BODY APU SHRT	< 20 Ohms OPEN LOW 0	M276, M275, M347, M1147, M348
R SIDE R SIDE OPEN R SIDE OVHT R SIDE SHRT	< 20 Ohms OPEN LOW 0	M1763, M1764, M269, M371, M356, M1910, M1912
MWW LOOP A MWW LOOP A OPEN MWW LOOP A FIRE MWW LOOP A SHRT	< 15 Ohms OPEN LOW 0	M270

LOM ALL

I. Put the Airplane to its Normal Condition.

NOTE: Do the following only if the Resistance Measurement was performed.

SUBTASK 26-18-02-720-007

(1) Remove the wire and fittings from the loop connectors.

SUBTASK 26-18-02-720-009

(2) Torque the jamnuts to 50 in-lb (6 N·m) - 60 in-lb (7 N·m).

SUBTASK 26-18-02-720-010

(3) Attach the lockwire to the element connectors (Lockwire, Cotter Pins, and Lockrings - Installation, TASK 20-10-44-400-801).

SUBTASK 26-18-02-860-006

(4) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT

SUBTASK 26-18-02-710-001

(5) Do this task: Wheel Well, Wing and Lower Aft Body Overheat Detection System - Operational Test, TASK 26-18-00-710-801.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

COMPARTMENT OVERHEAT DETECTION CONTROL UNIT, M237

TEST BOX ASSEMBLY

A

2222136 S0000496973_V3

C26007 Test Equipment
Figure 501/26-18-02-990-811

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G26769 S0006568208_V3

Compartment Overheat Detection Control Unit, M237
Figure 502/26-18-02-990-813 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

[1] COMPARTMENT OVERHEAT DETECTION CONTROL UNIT

B

2458153 S0000572092_V1

Compartment Overheat Detection Control Unit, M237
Figure 502/26-18-02-990-813 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FIRE EXTINGUISHING BOTTLE PRESSURE GAUGE - INSPECTION/CHECK

1. General

A. This procedure has these tasks:

(1) A check of the pressure gauge on the engine fire bottles

(2) A check of the pressure gauge on the Auxiliary Power Unit (APU) fire bottles.

TASK 26-20-00-210-802

2. Engine Fire Extinguishing Bottle Check

(Figure 601, Figure 602)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
26-21-01 P/B 401	ENGINE FIRE EXTINGUISHING BOTTLE - REMOVAL/INSTALLATION

B. Tools/Equipment

Reference	Description
STD-1336	Thermometer - Digital, 0-150 +/- 2 Degrees F, with a Probe, Thermocouple or Equivalent

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left

D. Fire Extinguishing Bottle Check

NOTE: This task is for fire extinguishing bottles with pressure gauges. No action is required if a pressure gauge is not installed.

SUBTASK 26-20-00-860-002

(1) Allow the fire bottles to reach ambient temperature.

NOTE: It may take several hours with the airplanes on the ground for the halon in the bottles to reach ambient temperature.

SUBTASK 26-20-00-010-003

(2) Get access to the engine fire bottles that are located on the aft bulkhead in the left main landing gear wheel well.

SUBTASK 26-20-00-970-002

WARNING

KEEP MERCURY THERMOMETERS AWAY FROM THE AIRPLANE. DO NOT GET MERCURY IN YOUR MOUTH, EYES, OR ON YOUR SKIN. IF THE THERMOMETER BREAKS, MERCURY CAN CAUSE INJURIES TO PERSONNEL, AND DAMAGE TO EQUIPMENT.

(3) Use a 0-150 +/- 2 degrees F digital thermometer, STD-1336, to get the ambient air temperature by the fire bottle.

SUBTASK 26-20-00-210-003

(4) Find the acceptable pressure range for the measured ambient air temperature in the temperature curve (Figure 602).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-20-00-210-004

(5) Read the pressure gauge on the fire bottles.

(a) Make sure that the pressure on the gauge is within the acceptable pressure range.

1) If the pressure on the gauge is not within the acceptable pressure range, replace the fire bottle with a serviceable fire bottle (PAGEBLOCK 26-21-01/401).

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE)

A

H58750 S0006568259_V2

Engine Fire Extinguishing Bottle Inspection
Figure 601/26-20-00-990-803 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

H58755 S0006568260_V3

Engine Fire Extinguishing Bottle Inspection
Figure 601/26-20-00-990-803 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G35596 S0006568232_V2

Fire Extinguisher Bottle Pressure - Temperature Curve
Figure 602/26-20-00-990-805

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-20-00-210-801

3. APU Fire Extinguishing Bottle Check

(Figure 603, Figure 604)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task is applicable to fire extinguishing bottles with pressure gauges. This task is not required if a pressure gauge is not installed.

B. References

Reference	Title
26-22-01 P/B 401	APU FIRE EXTINGUISHING BOTTLE - REMOVAL/INSTALLATION

C. Tools/Equipment

Reference	Description
STD-1336	Thermometer - Digital, 0-150 +/- 2 Degrees F, with a Probe, Thermocouple or Equivalent

D. Location Zones

Zone	Area
311	Area Aft of Pressure Bulkhead - Left

E. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

F. APU Fire Extinguishing Bottle Check

SUBTASK 26-20-00-860-001

(1) Allow the fire bottle to reach ambient temperature.

NOTE: It will take several hours with the airplane on the ground for the halon in the bottles to reach ambient temperature.

SUBTASK 26-20-00-010-001

(2) Open this access panel:

Number	Name/Location
311BL	Stabilizer Trim Access Door

SUBTASK 26-20-00-970-001

CAUTION

KEEP MERCURY THERMOMETERS AWAY FROM THE AIRPLANE. IF THE THERMOMETER BREAKS, MERCURY CAN CAUSE DAMAGE TO THE AIRPLANE COMPONENTS.

(3) Use a 0-150 +/- 2 degrees F digital thermometer, STD-1336, to get the ambient air temperature by the fire bottle.

(a) Do not use the total temperature indication from the airplane for the ambient air temperature.

SUBTASK 26-20-00-210-001

(4) Find the acceptable pressure range for the current temperature in the temperature curve (Figure 604).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-20-00-210-002

(5) Read the pressure gauge on the fire bottle.

SUBTASK 26-20-00-210-009

(6) Make sure that the pressure on the gauge falls within the pressure limits.

(a) If the pressure on the gauge is not within the limits shown, replace the fire bottle with a serviceable fire bottle (PAGEBLOCK 26-22-01/401).

G. Put the Airplane Back to Its Usual Condition

SUBTASK 26-20-00-410-002

(1) Close this access panel:

Number	Name/Location
311BL	Stabilizer Trim Access Door

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2358098 S0000539093_V2

APU Fire Extinguishing Bottle Inspection
Figure 603/26-20-00-990-804

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G35596 S0006568232_V2

Fire Extinguisher Bottle Pressure - Temperature Curve
Figure 604/26-20-00-990-806

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE EXTINGUISHING - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

(1) Engine fire extinguishing system - deactivation.

(2) Engine fire extinguishing system - activation.

TASK 26-21-00-040-801

2. Engine Fire Extinguishing System - Deactivation

A. General

(1) This task will deactivate the engine fire extinguishing system.

B. Tools/Equipment

Reference	Description
STD-858	Tag - DO NOT OPERATE

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left
315	APU Compartment - Left
316	APU Compartment - Right
411	Engine 1 - Engine
421	Engine 2 - Engine

D. Procedure

SUBTASK 26-21-00-020-010

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-00-420-007

(2) Put DO NOT OPERATE tags, STD-858 on the ENGINE 1 and ENGINE 2 fire handles on the P8-1 panel.

E. Engine Fire Extinguishing System - Tryout

NOTE: This tryout is to make sure that the power to the engine fire extinguishing system is in a zero energy state.

SUBTASK 26-21-00-020-011

(1) Remove the DO NOT OPERATE tags, STD-858 from the ENGINE 1 and ENGINE 2 fire handles on the P8-1 panel.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-210-002

(2) Push the manual override button and pull the ENGINE 1 and ENGINE 2 fire extinguishing handles on the P8-1 panel.

SUBTASK 26-21-00-210-003

(3) Turn the ENGINE 1 handle counterclockwise.

(a) Make sure that the L BOTTLE DISCHARGED light on the P8-1 panel stays off.

SUBTASK 26-21-00-210-004

(4) Turn the ENGINE 1 handle back to its initial position.

SUBTASK 26-21-00-210-005

(5) Turn the ENGINE 1 handle clockwise.

(a) Make sure that the R BOTTLE DISCHARGED light on the P8-1 panel stays off.

SUBTASK 26-21-00-210-006

(6) Turn the ENGINE 1 handle back to its initial position.

SUBTASK 26-21-00-210-007

(7) Turn the ENGINE 2 handle counterclockwise.

(a) Make sure that the L BOTTLE DISCHARGED light on the P8-1 panel stays off.

SUBTASK 26-21-00-210-008

(8) Turn the ENGINE 2 handle back to its initial position.

SUBTASK 26-21-00-210-009

(9) Turn the ENGINE 2 handle clockwise.

(a) Make sure that the R BOTTLE DISCHARGED light on the P8-1 panel stays off.

SUBTASK 26-21-00-210-010

(10) Turn the ENGINE 2 handle back to its initial position.

SUBTASK 26-21-00-210-011

(11) Set the ENGINE 1 and ENGINE 2 fire handles to their usual positions.

SUBTASK 26-21-00-420-008

(12) Put DO NOT OPERATE tags, STD-858 on the ENGINE 1 and ENGINE 2 fire handles on the P8-1 panel.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CAPTAIN'S FIRE WARNING SWITCH (P7)
(FIRST OFFICER'S IS OPPOSITE)

A

CAPTAIN'S WARNING
LIGHTS (P7)

B

ENGINE AND APU FIRE CONTROL PANEL (P8)

C

G20362 S0006568238_V3

Engine Fire Extinguishing System
Figure 201/26-21-00-990-806

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-21-00-440-801

3. **Engine Fire Extinguishing System - Activation**
(Figure 201)

A. **General**

(1) This task will activate the engine fire extinguishing system.

B. **Tools/Equipment**

Reference	Description
STD-858	Tag - DO NOT OPERATE

C. **Location Zones**

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left
315	APU Compartment - Left
316	APU Compartment - Right
411	Engine 1 - Engine
421	Engine 2 - Engine

D. **Procedure**

SUBTASK 26-21-00-420-009

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-00-020-013

(2) Remove the DO NOT OPERATE tags, STD-858, from the ENGINE 1 and ENGINE 2 fire handles on the P8-1 panel.

SUBTASK 26-21-00-710-006

(3) Put and hold the EXT TEST switch on the P8-1 panel to 1.

(a) Make sure the L and R lights come on.

NOTE: The APU light will also come on.

SUBTASK 26-21-00-710-004

(4) Put and hold the EXT TEST switch on the P8-1 panel to 2.

(a) Make sure the L and R lights come on.

NOTE: The APU light will also come on.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-710-005

(5) Release the EXT TEST switch.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A test of the engine fire bottle squib circuit.

(2) A test of the engine fire bottle pressure switch circuit.

(3) An airflow test through the discharge tubes.

(4) A pressure test of the engine fire bottle discharge tubes.

(5) A shutdown test of the engine systems.

TASK 26-21-00-730-801

2. Engine Fire Extinguishing Bottle Squib - Circuit Test

(Figure 501, Figure 502)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536
SPL-1663	Test Equipment - Fire Extinguishing System Part #: F80229-69 Supplier: 81205 Opt Part #: F80229-15 Supplier: 81205

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Reference	Description
SPL-10039	Cable Assy - Fire Extinguishing System Test Equipment Part #: F80229-20 Supplier: 81205 Part #: F80229-48 Supplier: 81205 Part #: F80229-59 Supplier: 81205 Part #: F80229-61 Supplier: 81205
SPL-10040	Shorting Plug - Fire Extinguishing System Test Equipment Part #: F80229-52 Supplier: 81205
STD-1079	Resistor - 10K Ohm or Greater

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Test

SUBTASK 26-21-00-860-001

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-00-020-001

(2) Disconnect the electrical connectors from the squibs.

WARNING DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(a) Before squibs are touched, do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

(b) Disconnect D582 and D584 to test the engine 1 circuits.

(c) Disconnect D1322 and D1324 to test the engine 2 circuits.

SUBTASK 26-21-00-020-002

WARNING PUT A PROTECTIVE CAP ON THE SQUIBS. IF YOU DO NOT PUT A PROTECTIVE CAP ON THE SQUIBS, THE FIRE BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

(3) Install a shorting plug, SPL-10040, on each squib.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-860-002

(4) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-00-480-009

(5) Set the toggle switch on the Fire System Test Equipment, SPL-1663 (test box), to the ON position.

SUBTASK 26-21-00-760-001

(6) Measure the resistance (RL) of the test box with a digital/analog multimeter, COM-1793, connected to the voltmeter jacks.

(a) Write down the value of RL in the Table 502 or, in the Table 503 as applicable for the adapter cable.

SUBTASK 26-21-00-480-010

(7) Set the toggle switch on the Fire System Test Equipment, SPL-1663, to the OFF position.

SUBTASK 26-21-00-480-011

(8) Set the multimeter to read DC volts.

SUBTASK 26-21-00-480-012

(9) Connect the applicable cable assembly, SPL-10039, for the primary circuit (A) to the connector on the Fire System Test Equipment, SPL-1663.

NOTE: The primary circuit (A) is between pins 4 and 3 of each squib connector.

NOTE: Look at the placard on the test box lid to determine the applicable adapter.

NOTE: Each squib has two circuits. The primary circuit (A) is between pins 4 and 3; the alternate circuit (B) is between pins 6 and 7. Either circuit can fire the squib. There are different adapter cables in the test set to test each circuit.

E. Do the Engine Fire Extinguishing Bottle Squib Circuit Test

SUBTASK 26-21-00-860-035

(1) Push the manual override button and pull the ENGINE 1 and ENGINE 2 fire handles on the P8-1 panel.

SUBTASK 26-21-00-480-013

(2) Connect the cable assembly, SPL-10039, for the primary circuit (A) to one of the squib connectors.

NOTE: These connectors are listed in the Table 501.

Table 501/26-21-00-993-804 Engine Fire Bottle Squib Circuit Test Data

CONNECTOR	SQUIB LOCATION	ENGINE	DIRECTION
D582	L (forward) bottle, squib 1A squib 1B	1	CCW
D1322	L (forward) bottle, squib 2A squib 2B	2	CCW
D584	R (aft) bottle, squib 1A squib 1B	1	CW
D1324	R (aft) bottle, squib 2A squib 2B	2	CW

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-860-036

(3) Turn the applicable fire handle and hold it in the direction specified in the Table 501.

(a) Make sure that the BOTTLE DISCHARGE light on the Fire System Test Equipment, SPL-1663, comes on.

(b) Write down the voltage shown on the multimeter as (V1) in the Table 502 or, in the Table 503 as applicable for the adapter cable.

(c) Set the switch on the test box to the ON position.

(d) Write down the voltage shown on the multimeter as (V2) in the Table 502 or, in the Table 503 as applicable for the adapter cable.

SUBTASK 26-21-00-730-001

(4) Release the fire handle.

(a) Make sure that the handle moves toward the center 10 degrees.

(b) Make sure that the multimeter shows 0 (± 2) volts.

SUBTASK 26-21-00-760-002

(5) Calculate the resistance Rc of the squib discharge circuit using this formula:

Rc = RL (V1/V2) - RL

(a) Make sure Rc is less than or equal to 3 ohms.

NOTE: If Rc is more than 3 ohms, the circuit can not supply enough current to fire the squib cartridge.

Table 502/26-21-00-993-805 Primary (A) Circuit Engine Fire Bottle Squib Test Result

CONNECTOR	RL (ohm)	V1 (volt)	V2 (volt)	Rc (ohm)
D582				
D1322				
D584				
D1324				

Table 503/26-21-00-993-806 Alternate (B) Circuit Engine Fire Bottle Squib Test Result

CONNECTOR	RL (ohm)	V1 (volt)	V2 (volt)	Rc (ohm)
D582				
D1322				
D584				
D1324				

SUBTASK 26-21-00-480-014

(6) Disconnect the adapter cable from the squib connector, and repeat the procedure until all the connectors listed in the Table 501 are tested.

(7) Disconnect the adapter cable for the primary circuit (A) from the squib connector.

(8) Do the procedure again with the adapter cable for the alternate circuit (B) until all the connectors listed in the Table 501 are tested.

NOTE: Each squib has two circuits. The primary circuit (A) is between pins 4 and 3; the alternate circuit (B) is between pins 6 and 7. Either circuit can fire the squib. There are different adapter cables in the test set to test each circuit.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(9) Disconnect the adapter cable from the squib connector when you have completed the procedure with both adapter cables.

SUBTASK 26-21-00-860-038

(10) Push the fire handles to their usual position.

SUBTASK 26-21-00-860-003

(11) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-00-080-008

(12) Remove shorting plug, SPL-10040, from the squibs.

SUBTASK 26-21-00-700-001

WARNING MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN FIRE SUDDENLY AND CAUSE INJURY TO PERSONNEL.

(13) Do these steps to make sure that there is no stray voltage at the electrical squib connector

Fire Bottle Squib Electrical Connector

	Engine	APU	Cargo
Connector Pins	3 and 4, and 6 and 7	3 and 4	1 and 2

(a) Connect the digital/analog multimeter, COM-1793, across the two pins.

(b) Make sure that the current is less than 5 milliamps AC, and less than 5 milliamps DC.

(c) Connect a resistor, STD-1079, across the multimeter probes.

(d) Make sure that the voltage is less than .250 volts AC, and less than 0.250 volts DC.

(e) If it is necessary, repeat the steps above for the other squib electrical connectors.

(f) Disconnect the multimeter.

SUBTASK 26-21-00-420-001

(14) Connect the electrical connectors to the squibs.

WARNING DO NOT TOUCH THE CONNECTOR PINS, OR OTHER CONDUCTORS. IF YOU TOUCH THESE CONDUCTORS, ELECTROSTATIC DISCHARGE CAN CAUSE DAMAGE TO THE COMPONENTS.

(a) Before squibs are touched, do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

(b) Connect D582 and D584 to Squib 1 on the left and right bottle.

(c) Connect D1322 and D1324 to Squib 2 on the left and right bottle.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-860-004

(15) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-00-710-001

(16) Set the EXT TEST switch to the 1 position.

(a) Make sure that the L and R lights come on.

NOTE: The Auxiliary Power Unit (APU) light should also come on.

SUBTASK 26-21-00-710-002

(17) Set the EXT TEST switch to the 2 position.

(a) Make sure that the L and R lights come on.

NOTE: The APU light should also come on.

SUBTASK 26-21-00-710-003

(18) Release the EXT TEST switch.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CAPTAIN'S FIRE WARNING SWITCH (P7)
(FIRST OFFICER'S IS OPPOSITE)

A

CAPTAIN'S WARNING
LIGHTS (P7)

B

ENGINE AND APU FIRE CONTROL PANEL (P8)

C

G20362 S0006568238_V3

Engine Fire Detection Test
Figure 501/26-21-00-990-801

ECCN 9E991 BOEING PROPRIETARY - See title page for details

MAIN LANDING GEAR WHEELWELL
(LEFT SIDE)

D

ENGINE FIRE EXTINGUISHING BOTTLE 1
(ENGINE FIRE EXTINGUISHING BOTTLE 2 IS EQUIVALENT)

E

G20370 S0006568239_V5

Engine Fire Extinguishing Bottles
Figure 502/26-21-00-990-807

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-21-00-730-802

3. **Engine Fire Extinguishing Bottle Pressure Switch Circuit Test**
(Figure 501)

A. **Location Zones**

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

B. **Engine Fire Extinguishing Bottle Pressure Switch Circuit Test**

SUBTASK 26-21-00-860-041

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-00-020-003

(2) Disconnect connector D586 from the pressure switch on the engine fire extinguishing bottle 1.

SUBTASK 26-21-00-020-004

(3) Disconnect connector D588 from the pressure switch on the engine fire extinguishing bottle 2.

SUBTASK 26-21-00-730-002

(4) Do a test of the engine fire bottle pressure switch circuit.

(a) Connect a jumper wire between pins 1 and 2 on D586.

1) Make sure that the 1 BOTTLE DISCHARGED light on the engine and APU fire control panel, P8, comes on.

(b) Remove the jumper from connector D586.

(c) Connect a jumper wire between pins 1 and 2 on D588.

1) Make sure the 2 BOTTLE DISCHARGED light on the engine and APU fire control panel, P8, comes on.

(d) Remove the jumper from connector D588.

SUBTASK 26-21-00-420-002

(5) Connect D586 to the pressure switch on the engine fire extinguishing bottle 1.

SUBTASK 26-21-00-420-003

(6) Connect D588 to the pressure switch on the engine fire extinguishing bottle 2.

SUBTASK 26-21-00-860-042

(7) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

END OF TASK

TASK 26-21-00-720-801

4. Engine Fire Extinguishing Discharge Line Flow Test

(Figure 503, Figure 504)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) The Engine Fire Extinguishing Discharge Line Flow Test checks the operation of the check valve, and makes sure there is nothing blocking the discharge lines.

B. References

Reference	Title
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

C. Tools/Equipment

Reference	Description
STD-1325	Source - Pressure, Capable of Supplying 35 +/- 5 PSIG

D. Consumable Materials

Reference	Description	Specification
D50004	Compound - Antiseize	BMS3-28
G50136	Compound - Corrosion Inhibiting, Non-drying Paste	BMS3-38
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38

E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
411	Engine 1 - Engine
421	Engine 2 - Engine

F. Engine Fire Extinguishing Discharge Line Flow Test

SUBTASK 26-21-00-010-001

WARNING

DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-020-005

(2) Remove the discharge tube from the discharge outlets on both engine fire bottles at positions 1 through 4.

SUBTASK 26-21-00-480-001

(3) Connect a pressure source, STD-1325, to the L fire bottle discharge line at position 2.

NOTE: The pressure source, STD-1325, can supply 35 ±5 psig (241 ±35 kPa).

(a) When connecting the test equipment to the discharge lines, do not let the test equipment hang from the discharge lines.

(b) Give sufficient support to the test equipment during the flow test.

(c) Make sure that air flows through all the nozzles on the right engine.

(d) Make sure that little or no air flows through the R fire bottle discharge line at position 4.

SUBTASK 26-21-00-080-002

(4) Remove the pressure source from the L fire bottle discharge line at position 2.

SUBTASK 26-21-00-480-002

(5) Connect a pressure source, STD-1325, to the R fire bottle discharge line at position 4.

NOTE: The pressure source, STD-1325, can supply 35 ±5 psig (241 ±35 kPa).

(a) Make sure that air flows through all the nozzles on the right engine.

(b) Make sure that little or no air flows through the L fire bottle discharge line at position 2.

SUBTASK 26-21-00-080-003

(6) Remove the pressure source from the R fire bottle discharge line at position 4.

SUBTASK 26-21-00-480-003

(7) Connect a pressure source, STD-1325, to the L fire bottle discharge line at position 1.

NOTE: The pressure source, STD-1325, can supply 35 ±5 psig (241 ±35 kPa).

(a) Make sure that air flows through all the nozzles on the left engine.

(b) Make sure that little or no air flows through the R fire bottle discharge line at position 3.

SUBTASK 26-21-00-080-004

(8) Remove the pressure source from the L fire bottle discharge line at position 1.

SUBTASK 26-21-00-480-004

(9) Connect a pressure source, STD-1325, to the R fire bottle discharge line at position 3.

NOTE: The pressure source, STD-1325, can supply 35 ±5 psig (241 ±35 kPa).

(a) Make sure that air flows through all the nozzles on the left engine.

(b) Make sure that little or no air flows through the L fire bottle discharge line at position 1.

SUBTASK 26-21-00-080-005

(10) Remove the pressure source from the R fire bottle discharge line at position 3.

SUBTASK 26-21-00-420-004

(11) Connect the discharge tubes to the discharge outlets on both bottles positions 1 through 4.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WARNING

DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(a) Apply a layer of compound, D50004 (preferred), to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) Cor-Ban 27L Compound, G50237, or corrosion inhibiting material, G50136, are also acceptable alternatives as anti-corrosion compounds to use in this location.

(b) Connect the tube assembly to the discharge head.

NOTE: Yellow is used to show the plumbing which supplies extinguishant to engine number 1. Blue is used to show the plumbing which supplies extinguishant to engine number 2.

(c) Remove any unwanted compound.

CAUTION

DO NOT APPLY MORE THAN THE SPECIFIED LIMIT OF TORQUE. IF YOU APPLY MORE THAN THE SPECIFIED LIMIT, DAMAGE TO THE FIRE BOTTLE CAN OCCUR.

(d) At positions 1 and 3, tighten the nut on the tube assembly to 450 ±23 in-lb (50.8 ±2.6 N·m).

CAUTION

DO NOT APPLY MORE THAN THE SPECIFIED LIMIT OF TORQUE. IF YOU APPLY MORE THAN THE SPECIFIED LIMIT, DAMAGE TO THE FIRE BOTTLE CAN OCCUR.

(e) At positions 2 and 4, tighten the nut on the tube assembly to 360 ±18 in-lb (40.7 ±2.0 N·m).

SUBTASK 26-21-00-010-002

WARNING

OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS WHEN YOU CLOSE THE THRUST REVERSERS, INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(12) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

END OF TASK

TASK 26-21-00-730-803

5. Engine Fire Extinguishing Discharge Line Pressure Test

(Figure 503, Figure 504)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) The pressure test is the same for both engines fire extinguishing discharge lines.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

B. References

Reference	Title
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1647	Test Equipment - Engine Fire Extinguishing System Part #: C26004-83 Supplier: 81205 Part #: C26004-84 Supplier: 81205 Opt Part #: C26004-32 Supplier: 81205 Opt Part #: C26004-33 Supplier: 81205 Opt Part #: C26004-73 Supplier: 81205 Opt Part #: C26004-74 Supplier: 81205 Opt Part #: C26004-78 Supplier: 81205 Opt Part #: C26004-79 Supplier: 81205
STD-1325	Source - Pressure, Capable of Supplying 35 +/- 5 PSIG
STD-12129	Pressure Regulator - Adjustable

D. Consumable Materials

Reference	Description	Specification
D50004	Compound - Antiseize	BMS3-28
G50136	Compound - Corrosion Inhibiting, Non-drying Paste	BMS3-38
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38

E. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
411	Engine 1 - Engine
421	Engine 2 - Engine

F. Engine Fire Extinguishing Discharge Line Pressure Test

SUBTASK 26-21-00-010-003

WARNING THE FIRE EXTINGUISHING BOTTLES CONTAIN POISONOUS GAS. DO NOT APPLY ELECTRICAL POWER TO THE BOTTLE DISCHARGE SQUIBS TO PREVENT ACCIDENTAL DISCHARGE. IF YOU DO NOT OBEY, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

WARNING DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSER: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THIS SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-480-006

(2) Install plugs on the fire extinguishing nozzles at the left engine (engine 1).

NOTE: The equipment, SPL-1647, or other suitable plug may be used.

SUBTASK 26-21-00-020-006

(3) Disconnect the tee fitting from the discharge outlet on the L fire bottle at position 1.

SUBTASK 26-21-00-420-013

(4) Install the protective cap on the fire bottle discharge outlet.

SUBTASK 26-21-00-480-005

(5) Connect a pressure source, STD-1325, and an adjustable pressure regulator, STD-12129, to the L fire bottle discharge line at position 1.

(a) When connecting the test equipment to the discharge lines, do not let the test equipment hang from the discharge lines.

(b) Give the sufficient support to the test equipment during the pressure test.

SUBTASK 26-21-00-780-001

(6) Pressurize the discharge tubing that goes from L bottle to engine 1 to a pressure of 35 ±5 psi (241 ±35 kPa).

(a) Wait at least 3 minutes for the air pressure to stabilize.

SUBTASK 26-21-00-780-002

(7) Close the pressure regulator.

SUBTASK 26-21-00-820-001

(8) Turn off the pressure source.

(a) Record the stabilized air pressure.

(b) Wait 2 to 3 minutes, then check the pressure.

1) Make sure that the pressure loss during the 2 to 3 minutes waiting period is not more than 1 psi (6.9 kPa).

2) If the pressure loss is more than 1 psi (6.9 kPa), do a check of the pressure source connections and the plugs used to seal the fire extinguishing nozzles.

3) If they do not show any indication of leakage, then do a check of all fittings, seal surfaces, valves, and tubing in the discharge line and repair the problems that you find.

SUBTASK 26-21-00-780-003

(9) Bleed the fire extinguishing plumbing to 0 psi and disconnect the test equipment from position 1.

SUBTASK 26-21-00-480-008

(10) Install plugs on the fire extinguishing nozzles at the right engine (engine 2).

NOTE: The equipment, SPL-1647, or other suitable plug may be used.

SUBTASK 26-21-00-020-009

(11) Disconnect the tee fitting from the discharge outlet on the R fire bottle at position 4.

SUBTASK 26-21-00-420-014

(12) Install protective cap on the fire bottle discharge outlet.

SUBTASK 26-21-00-480-007

(13) Connect the test equipment to the R fire bottle discharge line at position 4.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-780-004

(14) Pressurize the discharge tubing that goes from R bottle to engine 2 to a pressure of 35 ±5 psi (241 ±35 kPa).

(a) Wait at least 3 minutes for the air pressure to stabilize.

SUBTASK 26-21-00-780-005

(15) Close the pressure regulator.

SUBTASK 26-21-00-820-002

(16) Turn off the pressure source.

(a) Record the stabilized air pressure.

(b) Wait 2 to 3 minutes, then check the pressure.

1) Make sure that the pressure loss during the 2 to 3 minutes waiting period is not more than 1 psi (6.9 kPa).

2) If the pressure loss is more than 1 psi (6.9 kPa), do a check of the pressure source connections and the plugs used to seal the fire extinguishing nozzles.

3) If they do not show any indication of leakage, then do a check of all fittings, seal surfaces, valves, and tubing in the discharge line and repair the problems that you find.

SUBTASK 26-21-00-780-006

(17) Bleed the fire extinguishing plumbing to 0 psi and disconnect the pressure source at position 4.

SUBTASK 26-21-00-020-014

CAUTION

MAKE SURE THAT YOU REMOVE THE PLUGS FROM THE FIRE EXTINGUISHING NOZZLES AT THE TWO ENGINES. IF YOU DO NOT REMOVE THE PLUGS, DAMAGE TO THE EQUIPMENT CAN OCCUR.

(18) Remove plugs on the fire extinguishing nozzles at the left engine (engine 1).

SUBTASK 26-21-00-020-015

CAUTION

MAKE SURE THAT YOU REMOVE THE PLUGS FROM THE FIRE EXTINGUISHING NOZZLES AT THE TWO ENGINES. IF YOU DO NOT REMOVE THE PLUGS, DAMAGE TO THE EQUIPMENT CAN OCCUR.

(19) Remove plugs on the fire extinguishing nozzles at the right engine (engine 2).

SUBTASK 26-21-00-080-007

(20) Remove the test equipment.

SUBTASK 26-21-00-420-005

(21) Remove protective caps from the fire bottle discharge outlets.

SUBTASK 26-21-00-420-015

(22) Connect the discharge tubes to the discharge outlets at positions 1 and 4.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WARNING

DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(a) Apply a layer of compound, D50004 (preferred), to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) Cor-Ban 27L Compound, G50237, or corrosion inhibiting material, G50136, are also acceptable alternatives as anti-corrosion compounds to use in this location.

(b) Connect the tube assembly to the discharge head.

NOTE: Yellow is used to show the plumbing which supplies extinguishant to engine number 1. Blue is used to show the plumbing which supplies extinguishant to engine number 2.

(c) Remove any unwanted compound.

CAUTION

DO NOT APPLY MORE THAN THE SPECIFIED LIMIT OF TORQUE. IF YOU APPLY MORE THAN THE SPECIFIED LIMIT, DAMAGE TO THE FIRE BOTTLE CAN OCCUR.

(d) At the position 1, tighten the nut on the tube assembly to 450 ±18 in-lb (51 ±2 N·m).

CAUTION

DO NOT APPLY MORE THAN THE SPECIFIED LIMIT OF TORQUE. IF YOU APPLY MORE THAN THE SPECIFIED LIMIT, DAMAGE TO THE FIRE BOTTLE CAN OCCUR.

(e) At the position 4, tighten the nut on the tube assembly to 360 ±18 in-lb (41 ±2 N·m).

(f) Make sure that there is 0.25 in. (6.35 mm) minimum clearance between the discharge tubes and the electrical harness.

SUBTASK 26-21-00-010-004

WARNING

OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS WHEN YOU CLOSE THE THRUST REVERSERS, INJURIES TO PERSONS OR DAMAGE TO EQUIPMENT CAN OCCUR.

(23) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G28137 S0006568243_V3

Engine Fire Extinguishing Test
Figure 503/26-21-00-990-802 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G28064 S0006568244_V3

Engine Fire Extinguishing Test
Figure 503/26-21-00-990-802 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE EXTINGUISHING BOTTLES
(MAIN LANDING GEAR WHEEL WELL, LEFT SIDE)

K03546 S0006568245_V5

Test Setup
Figure 504/26-21-00-990-805 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLOW TEST

PRESSURE TEST

K03773 S0006568246_V2

Test Setup
Figure 504/26-21-00-990-805 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-21-00-720-802

6. Engine Fire Switch System Shutdown Test

(Figure 501, Figure 505, Figure 506)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This procedure checks that the engine is isolated from the fuel, hydraulic, pneumatic and electrical systems, and that the thrust reverser is disabled when the fire handle is pulled. It should be performed when the Engine and Auxiliary Power Unit (APU) Fire Control Panel is replaced.

(2) This test is the same for both engines.

B. References

Reference	Title
29-11-00-860-801	Hydraulic System A or B Pressurization (P/B 201)
29-11-00-860-805	Hydraulic System A or B Power Removal (P/B 201)
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
410	Subzone - Engine 1
420	Subzone - Engine 2

D. Prepare for the test

SUBTASK 26-21-00-010-005

WARNING MAKE SURE THAT THERE ARE NO PERSONS OR EQUIPMENT IN THE AREA OF THE THRUST REVERSER. MOVEMENT OF THE THRUST REVERSER CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

WARNING DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSER (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) For the left thrust reverser, do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-860-006

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-00-860-065

(3) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
D	15	C01401	LANDING GEAR AIR/GND RELAY
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6

E. Engine Fire Switch System Shutdown Test

SUBTASK 26-21-00-860-008

(1) Make sure that the START SWITCH for each engine is in the OFF position.

SUBTASK 26-21-00-860-009

(2) Set the engine start lever to IDLE.

(a) Make sure that the engine SPAR VALVE CLOSED light on the P5 panel comes on bright, then goes out.

(b) Make sure that the engine ENG VALVE CLOSED light on the P5 panel comes on bright.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-860-029

> **WARNING** DO NOT TURN FIRE HANDLES WHILE THEY ARE OUT. THAT CAN CAUSE THE FIRE BOTTLES TO DISCHARGE. IF YOU DO NOT OBEY, DAMAGE TO EQUIPMENT AND INJURY TO PERSONNEL CAN OCCUR.

(3) Pull the engine fire handle on the P8 panel.

(a) Make sure that the fire handle does not extend.

SUBTASK 26-21-00-860-010

(4) Push the manual override button and pull the engine fire handle on the P8 panel.

(a) Make sure that the engine SPAR VALVE CLOSED light on the P5 panel comes on bright while the valve is in transition, then goes dim.

(b) Make sure that the engine ENG VALVE CLOSED light on the P5 panel goes dim.

SUBTASK 26-21-00-860-011

(5) Push in the engine fire handle on the P8 panel to the normal position.

SUBTASK 26-21-00-860-012

(6) Set the engine start lever to CUTOFF.

SUBTASK 26-21-00-860-043

(7) Push the manual override button and pull the engine fire handle on the P8 panel.

(a) Make sure that the engine hydraulic system A or B fluid shutoff valve, V33 or V34 operates by observing that the position indicator arm on the valve actuator moves from OPEN to CLOSED position(Figure 505).

NOTE: An indicator arm on the output shaft of the electrical actuator assembly aligns with the CLOSED and OPEN markings on the actuator nameplate to indicate the valve position.

SUBTASK 26-21-00-860-044

(8) Push in the engine fire handle on the P8 panel to the normal position.

(a) Make sure that the shutoff valve V33 or V34 operates by observing that the position indicator arm on the valve actuator moves from CLOSED to OPEN position.

NOTE: An indicator arm on the output shaft of the electrical actuator assembly aligns with the CLOSED and OPEN markings on the actuator nameplate to indicate the valve position.

SUBTASK 26-21-00-860-045

(9) Set the BLEED air switch for the applicable engine ON.

SUBTASK 26-21-00-860-046

(10) Push the manual override button and pull the engine fire handle on the P8 panel.

(a) Make sure that the engine bleed air regulator solenoid closes by listening or feeling it click (Figure 506).

SUBTASK 26-21-00-860-047

(11) Push in the engine fire handle on the P8 panel to the normal position.

SUBTASK 26-21-00-860-048

(12) Set the BLEED air switch for the applicable engine OFF.

SUBTASK 26-21-00-020-016

(13) Disconnect the electrical connector DP1206 from the engine Integrated Drive Generator (IDG).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-860-049

(14) Set the GEN CONT switch on the P5-4 panel OFF.

(a) Make sure that the resistance between pins 3 (LO) and 2 (HI) on DP1206 is less than 10 ohms.

SUBTASK 26-21-00-860-050

(15) Set the GEN CONT switch on the P5-4 panel ON.

(a) Make sure that the resistance between pins 3 (LO) and 2 (HI) on DP1206 is at least 230 kohms.

SUBTASK 26-21-00-860-051

(16) Push the manual override button and pull the engine fire handle on the P8 panel.

(a) Make sure that the resistance between pins 3 (LO) and 2 (HI) on DP1206 is less than 10 ohms after 5 seconds.

SUBTASK 26-21-00-860-052

(17) Push in the engine fire handle on the P8 panel to the normal position.

SUBTASK 26-21-00-420-012

(18) Connect the electrical connector DP1206 to the engine IDG.

SUBTASK 26-21-00-010-007

WARNING OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(19) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

SUBTASK 26-21-00-860-053

(20) Do this task: Hydraulic System A or B Pressurization, TASK 29-11-00-860-801.

SUBTASK 26-21-00-860-054

(21) Make sure that these circuit breakers are closed:

CAPT Electrical System Panel, P18-2

Row	Col	Number	Name
B	5	C00276	ENGINE 1 THRUST REVERSER CONT

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
C	7	C00277	ENGINE 2 THRUST REVERSER CONT

SUBTASK 26-21-00-860-055

(22) Set the ENG START switch to CONT.

NOTE: Setting the ENG START switch to CONT applies power to the Electronic Engine Control (EEC). It is not necessary to apply power to the EEC to extend and retract the thrust reverser. However, if the EEC is not powered, the reverse thrust lever will be blocked by the interlock and will not move to the full reverse thrust position. Thus, the REV light will not indicate the sleeve position.

SUBTASK 26-21-00-860-056

(23) Push the manual override button and pull the engine fire handle on the P8 panel.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-00-860-063

> **WARNING** MAKE SURE THAT THERE ARE NO PERSONS OR EQUIPMENT IN THE AREA OF THE THRUST REVERSER. MOVEMENT OF THE THRUST REVERSER CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(24) Move the engine reverse thrust lever up and aft to the extend position.

(a) Make sure that the thrust reverser does not extend.

SUBTASK 26-21-00-860-057

(25) Move the engine reverse thrust lever down and forward to the retract position.

SUBTASK 26-21-00-860-058

(26) Push in the engine fire handle on the P8 panel to the normal position.

SUBTASK 26-21-00-860-064

> **WARNING** MAKE SURE THAT THERE ARE NO PERSONS OR EQUIPMENT IN THE AREA OF THE THRUST REVERSER. MOVEMENT OF THE THRUST REVERSER CAN CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(27) Move the engine reverse thrust lever up and aft to the extend position.

(a) Make sure that the thrust reverser extends.

SUBTASK 26-21-00-860-059

(28) Move the engine reverse thrust lever down and forward to the retract position.

(a) Make sure that the thrust reverser retracts.

SUBTASK 26-21-00-860-060

(29) Set the ENG START switch to OFF.

F. Put the Airplane Back to Its Usual Condition

SUBTASK 26-21-00-860-061

(1) Do this task: Hydraulic System A or B Power Removal, TASK 29-11-00-860-805.

SUBTASK 26-21-00-860-062

(2) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	19	C00388	FIRE PROTECTION DET OVHT WW WING BODY
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FWD

INBD

MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE)

A

G20383 S0006568248_V4

Engine EDP Shutoff Valve Test
Figure 505/26-21-00-990-803 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

MAIN LANDING GEAR WHEEL WELL
(RIGHT SIDE)

B

H50915 S0006568249_V3

Engine EDP Shutoff Valve Test
Figure 505/26-21-00-990-803 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Engine Bleed Air Regulator Test
Figure 506/26-21-00-990-804

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE EXTINGUISHING BOTTLE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of an engine fire extinguishing bottle.

(2) An installation of an engine fire extinguishing bottle.

TASK 26-21-01-000-801

2. Engine Fire Extinguishing Bottle Removal

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives instructions to remove the engine fire extinguishing bottle [1].

(2) The engine fire extinguishing bottles [1] are installed in the main landing gear wheel well. The removal procedure is the same for each bottle.

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)

C. Tools/Equipment

Reference	Description
STD-1168	Cap - Shorting or Faraday Cap

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Engine Fire Extinguishing Bottle Removal

SUBTASK 26-21-01-940-003

> **WARNING**
> MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 26-21-01-860-001

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-01-020-013

> **WARNING** DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) Before touching the squibs [7], do these tasks for devices that are sensitive to electrostatic discharge:

NOTE: The squib is also known as cartridge.

- ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
- ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 26-21-01-020-001

(4) Disconnect the electrical connectors [6] from the squibs [7].

SUBTASK 26-21-01-020-002

> **WARNING** DO NOT MOVE OR TOUCH THE CARTRIDGE WITHOUT A SHORTING CAP OR FARADAY CAP INSTALLED ON THE ENDS OF THE SQUIB. THE SQUIB IS AN EXPLOSIVE DEVICE. ACCIDENTAL OPERATION OF THE SQUIB CAN CAUSE INJURY TO PERSONS.

> **CAUTION** DO NOT PUT SHUNT PLUGS ON THE FIRE BOTTLE SQUIBS. THE SHUNT PLUGS CAN CAUSE DAMAGE TO THE SQUIB PINS.

(5) Install protective cap [8] or shorting or faraday cap, STD-1168, on each squib [7].

NOTE: Protective caps, or shorting or faraday caps prevent the squibs from possible activation due to static electricity.

NOTE: Protective caps are supplied with the fire extinguishing bottles and shorting or faraday cap, STD-1168, can be used as alternative to protective caps.

SUBTASK 26-21-01-020-003

(6) Disconnect the electrical connector [5] from the pressure switch [4].

SUBTASK 26-21-01-020-015

(7) Remove and discard the lockwire from the gland nuts.

SUBTASK 26-21-01-020-004

(8) Remove the discharge line from both fire extinguishing bottle [1] discharge outlets.

(a) If it is necessary loosen other fittings to move the discharge lines out of the way.

SUBTASK 26-21-01-420-004

(9) Install protective caps on each of the discharge outlets.

NOTE: Protective caps are supplied with the fire extinguishing bottles.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-01-420-012

(10) Install protective caps on each of the discharge tubes.

SUBTASK 26-21-01-020-005

(11) Remove the four bolts [2] and washers [3].

SUBTASK 26-21-01-020-006

WARNING	BE CAREFUL WHEN YOU MOVE THE FIRE EXTINGUISHING BOTTLE. THE FIRE EXTINGUISHING BOTTLE IS HIGHLY PRESSURIZED AND HAS AN EXPLOSIVE SQUIB AS A COMPONENT. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(12) Remove the applicable fire extinguishing bottle [1].

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE)

A

F60123 S0006568254_V3

Engine Fire Extinguishing Bottle Installation
Figure 401/26-21-01-990-801 (Sheet 1 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1 POSITION #1: T-FITTING CONNECTION TO THE ENGINE FIRE EXTINGUISHING BOTTLE 1 (POSITION #4: ENGINE FIRE EXTINGUISHING BOTTLE 2 IS EQUIVALENT)

2 POSITION #2: HOSE ASSEMBLY CONNECTION TO THE ENGINE FIRE EXTINGUISHING BOTTLE 1 (POSITION #3: ENGINE FIRE EXTINGUISHING BOTTLE 2 IS EQUIVALENT)

F60166 S0006568255_V10

Engine Fire Extinguishing Bottle Installation
Figure 401/26-21-01-990-801 (Sheet 2 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE EXTINGUISHING BOTTLES
(MAIN LANDING GEAR WHEEL WELL, LEFT SIDE)

D

2826565 S0000654898_V2

Engine Fire Extinguishing Bottle Installation
Figure 401/26-21-01-990-801 (Sheet 3 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE EXTINGUISHING BOTTLE

F

1 THESE TWO PROTECTIVE CAPS STAY INSTALLED ON THE FIRE EXTINGUISHING BOTTLE FOR THE WEIGHING.

3035828 S0000805401_V1

Engine Fire Extinguishing Bottle Installation
Figure 401/26-21-01-990-801 (Sheet 4 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-21-01-400-801

3. Engine Fire Extinguishing Bottle Installation

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives instructions to install the engine fire extinguishing bottle [1].

(2) The engine fire extinguishing bottle [1] is installed in the left main wheel well. The installation procedure is the same for each bottle.

B. References

Reference	Title
20-40-11-910-801	Static Grounding (P/B 201)
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
26-20-00-210-802	Engine Fire Extinguishing Bottle Check (P/B 601)
26-21-00-720-801	Engine Fire Extinguishing Discharge Line Flow Test (P/B 501)
26-21-00-730-802	Engine Fire Extinguishing Bottle Pressure Switch Circuit Test (P/B 501)
32-00-01-480-801	Landing Gear Downlock Pins Installation (P/B 201)
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536
COM-17114	Gauge - Force Part #: FDIX 100 Supplier: 0BFD9 Part #: FDIX 50 Supplier: 0BFD9 Opt Part #: FDI 100 Supplier: 0BFD9 Opt Part #: FDI 50 Supplier: 0BFD9 Opt Part #: FDV 100 Supplier: 0BFD9 Opt Part #: FDV 50 Supplier: 0BFD9
STD-1079	Resistor - 10K Ohm or Greater
STD-1168	Cap - Shorting or Faraday Cap

D. Consumable Materials

Reference	Description	Specification
A50110	Sealant - Fuel Tank	BMS5-45 Class B-2
A50155	Sealant - Fuel Tank	BMS5-45 Class C
A50231	Sealant - Pressure And Environmental - Chromate Type	BMS5-95 Class B
A50296	Sealant - Pressure And Environmental - Chromate Type	BMS5-95 Class C
B00083	Solvent - VM&P Naphthas	TT-N-95 Type II, ASTM D-3735 Type III
B00184	Solvent - Presealing, Cleaning Solvent	BMS11-7
D50004	Compound - Antiseize	BMS3-28
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)
G01048	Lockwire - MS20995C32, Corrosion Resistant Steel - 0.032 Inch (0.8128 mm) Diameter	NASM20995
G50077	Abrasive - Aluminum Oxide Paper, 240 grit or finer	
G50136	Compound - Corrosion Inhibiting, Non-drying Paste	BMS3-38

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Reference	Description	Specification
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Fire extinguishing bottle	Not Specified	
7	Squib	26-21-60-01-033	LOM ALL
		26-21-60-01-058	LOM ALL

F. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

G. Engine Fire Extinguishing Bottle Installation

SUBTASK 26-21-01-940-004

> **WARNING** MAKE SURE THAT THE DOWNLOCK PINS ARE INSTALLED IN ALL OF THE LANDING GEAR. WITHOUT THE DOWNLOCK PINS, THE LANDING GEAR CAN RETRACT AND CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) If the downlock pins are not installed in the nose and main landing gear, do this task: Landing Gear Downlock Pins Installation, TASK 32-00-01-480-801.

SUBTASK 26-21-01-910-001

(2) Make sure that the airplane is grounded correctly (TASK 20-40-11-910-801).

SUBTASK 26-21-01-280-001

(3) Use a force gauge, COM-17114, to weigh the fire extinguishing bottle [1].

SUBTASK 26-21-01-410-001

(4) If the protective caps [8] are installed on the squibs [7], weigh the fire extinguishing bottle [1] as follows:

(a) Make sure that the weight of the fire extinguishing bottle [1] is 0.00 ±0.10 lb (0.00 ±0.05 kg) of the weight listed on the bottle data plate.

1) Record the weight marked on the fire extinguishing bottle [1] as "Value A".

2) Make sure that protective caps [8] are installed on the squibs [7] and remove the rest of protective caps from the fire extinguishing bottle [1], before weighing.

NOTE: Only the weight of the protective caps located on the squibs, supplied with the fire extinguishing bottle, are included on the weight listed on the ID plate.

3) Weigh the assembly, including the charged bottle, discharge heads, squibs [7], protective caps [8] installed on the squibs and record as "Value B".

4) If the difference between the weight marked on the fire extinguishing bottle [1] ("Value A") and measured weight ("Value B") is more than 0.10 lb (0.05 kg), replace the fire extinguishing bottle [1].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-01-960-001

(5) If the shorting or faraday caps, STD-1168, are installed on the squibs [7], weigh the fire extinguishing bottle [1] as follows:

(a) Make sure that the weight of the fire extinguishing bottle [1] is 0.00 ±0.10 lb (0.00 ±0.05 kg) of the weight listed on the bottle data plate.

1) Weigh the shorting or faraday caps, STD-1168, including its caps and record as "Value A".

2) Record the weight marked on the fire extinguishing bottle [1] as "Value B".

3) Remove the rest of the protective caps from the fire extinguishing bottle [1], before weighing.

4) Weigh the assembly, including the charged bottle, discharge heads, squibs [7], shorting or faraday caps, STD-1168 (including shorting plugs' caps), and the protective caps [8] supplied for the squibs [7] and record as "Value C".

NOTE: Weigh of protective caps supplied with the fire extinguishing bottle for the squibs only are included on ID plate.

5) Find the measured weight of the fire extinguishing bottle [1] by subtracting "Value A" from "Value C" and record as "Value D" (Value D = Value C - Value A).

6) If the difference between the weight marked on the fire extinguishing bottle [1] ("Value B") and measured weight ("Value D") is more than 0.10 lb (0.05 kg), replace the fire extinguishing bottle [1].

SUBTASK 26-21-01-200-001

(6) If the previous fire extinguishing bottle [1] was discharged, do this step:

(a) Check the discharge tube for any debris.

NOTE: Pay particular attention to the discharge outlets at the engine.

SUBTASK 26-21-01-200-002

(7) Examine the check valve to make sure that the ball moves freely.

NOTE: It may be necessary to further disconnect the discharge tubes to get access to the check valve.

SUBTASK 26-21-01-860-002

(8) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-01-420-001

(9) Do these steps to install the fire extinguishing bottle [1]:

WARNING REMOVE THE CAPS FROM THE FILL FITTING ASSEMBLY ON THE FIRE EXTINGUISHER BOTTLES. THE SAFETY RELEASE ON THE BOTTLE WILL NOT OPERATE IF THE CAPS ARE ON. IF YOU DO NOT OBEY, INJURY CAN OCCUR BECAUSE OF FIRE.

(a) Remove the caps from the fill fitting assembly on the fire extinguishing bottle [1].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) Make sure that the inboard mounting lugs and support fixture mounting surfaces are clean.

1) Sand the support fixture mounting surfaces with 240 grit or finer abrasive paper, G50077.

2) Use cotton wiper, G00034, moist in solvent, B00184, to clean the washers [3], inboard mounting lugs, and mounting surfaces of the support fixture.

(c) Apply a fay surface seal with sealant, A50110, sealant, A50155, sealant, A50231, or sealant, A50296, to the inboard mounting surfaces.

WARNING MAKE SURE THAT THE SHORTING PLUGS STAY CONNECTED WHEN THE TESTER COM-1550 OR A NON-FAIL-SAFE IGNITER TESTER IS IN OPERATION. AN ELECTRICAL CHARGE BETWEEN THE BOTTLE WALL AND INITIATOR PIN CAN CAUSE THE BOTTLE TO DEPLOY. IF THE BOTTLE DEPLOYS, INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT CAN OCCUR.

WARNING BE CAREFUL WHEN YOU MOVE THE FIRE EXTINGUISHING BOTTLE. THE FIRE EXTINGUISHING BOTTLE IS HIGHLY PRESSURIZED AND HAS AN EXPLOSIVE SQUIB AS A COMPONENT. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(d) Put the fire extinguishing bottle [1] in its correct position on the support bracket.

(e) Install the bolts [2] and washers [3].

1) If it is necessary, install two washers [3] between each mounting lug and support bracket.

(f) Measure the electrical bonding resistance between the fire extinguishing bottle [1] and support bracket (SWPM 20-20-00).

1) Use an intrinsically safe approved bonding meter, COM-1550.

2) Make sure that the resistance is 0.0025 ohm (2.5 milliohms) or less.

a) If the resistance is more than 0.0025 ohm (2.5 milliohms), clean the bonding surfaces between the inboard mounting lugs and support bracket with solvent, B00083, and retest.

(g) If the discharge head does not align with the hose or tube assembly, do this step:

1) Loosen the discharge outlet gland nut and rotate the discharge outlet so it aligns with the tube assembly.

NOTE: Even if the discharge outlet is already aligned, the gland nut is not yet torqued down.

(h) Tighten the gland nut to 540 in-lb (61.0 N·m) - 660 in-lb (74.6 N·m).

(i) Do this task: Engine Fire Extinguishing Discharge Line Flow Test, TASK 26-21-00-720-801.

(j) Remove the protective caps from each of the discharge outlets.

(k) Remove the protective caps from each of the discharge tubes.

(l) Install MS20995C32 lockwire, G01048, between each gland nut, or between the gland nut and discharge head, depending on the configuration.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WARNING

USE NITRILE GLOVES FOR SKIN PROTECTION WHEN YOU USE COR-BAN 27L, G50237. IF IT GETS ON YOUR SKIN, IMMEDIATELY REMOVE IT WITH WATER. IF THIS MATERIAL GETS IN YOUR EYES, IMMEDIATELY FLUSH YOUR EYES WITH WATER. GET MEDICAL AID. THIS MATERIAL CONTAINS FLAMMABLE AGENTS WHICH CAN CAUSE INJURIES TO PERSONNEL.

(m) Apply a layer of compound, D50004 (preferred), to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) The Cor-Ban 27L Compound, G50237, or corrosion inhibiting material, G50136, are also acceptable alternatives as anti-corrosion compounds to use in this location.

(n) Connect the tube assembly to the discharge head.

NOTE: Yellow is used to show the plumbing which supplies extinguishing agent to engine number 1. Blue is used to show the plumbing which supplies extinguishing agent to engine number 2.

(o) Remove any unwanted compound.

CAUTION

DO NOT APPLY MORE THAN THE SPECIFIED LIMIT OF TORQUE. IF YOU APPLY MORE THAN THE SPECIFIED LIMIT, DAMAGE TO THE FIRE BOTTLE CAN OCCUR.

(p) At positions 1 and 3, tighten the nut on the tube assembly to 450 ±23 in-lb (50.8 ±2.6 N·m).

NOTE: Positions 1 connects T-Fitting to engine fire extinguishing bottle 1.

NOTE: Position 3 connects Hose Assembly to engine fire extinguishing bottle 2.

CAUTION

DO NOT APPLY MORE THAN THE SPECIFIED LIMIT OF TORQUE. IF YOU APPLY MORE THAN THE SPECIFIED LIMIT, DAMAGE TO THE FIRE BOTTLE CAN OCCUR.

(q) At positions 2 and 4, tighten the nut on the tube assembly to 360 ±18 in-lb (40.7 ±2.0 N·m).

NOTE: Positions 2 connects Hose Assembly to engine fire extinguishing bottle 1.

NOTE: Position 4 connects T-Fitting to engine fire extinguishing bottle 2.

SUBTASK 26-21-01-710-001

(10) Do the following steps before connecting the electrical connector [6] to the squib [7]:

WARNING

DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Before you touch the squib [7], do these tasks for devices that are sensitive to electrostatic discharge:

- ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
- ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-01-700-001

> **WARNING** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN FIRE SUDDENLY AND CAUSE INJURY TO PERSONNEL.

(11) Do these steps to make sure that there is no stray voltage at the electrical squib connector

Fire Bottle Squib Electrical Connector

	Engine	APU	Cargo
Connector Pins	3 and 4, and 6 and 7	3 and 4	1 and 2

(a) Connect the digital/analog multimeter, COM-1793, across the two pins.

(b) Make sure that the current is less than 5 milliamps AC, and less than 5 milliamps DC.

(c) Connect a resistor, STD-1079, across the multimeter probes.

(d) Make sure that the voltage is less than .250 volts AC, and less than 0.250 volts DC.

(e) If it is necessary, repeat the steps above for the other squib electrical connectors.

(f) Disconnect the multimeter.

SUBTASK 26-21-01-420-010

(12) Remove the protective caps [8] or shorting or faraday caps, STD-1168, from the squibs [7].

SUBTASK 26-21-01-420-003

(13) Connect the electrical connector [6] to the squib [7].

NOTE: The squib pins can cause damage to the electrical connector if the pins do not correctly engage the electrical connector.

SUBTASK 26-21-01-420-002

(14) Test the electrical wiring up to the pressure switch [4], do this task: Engine Fire Extinguishing Bottle Pressure Switch Circuit Test, TASK 26-21-00-730-802.

SUBTASK 26-21-01-420-005

(15) Connect the electrical connector [5] to pressure switch [4].

SUBTASK 26-21-01-210-004

(16) Do the visual check of the pressure gauge, do this task: Engine Fire Extinguishing Bottle Check, TASK 26-20-00-210-802.

H. Engine Fire Extinguishing Bottle Installation Test

SUBTASK 26-21-01-860-003

(1) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-01-741-001

(2) Set the EXT TEST switch, on the P8-1 panel, to the 1 position.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) Make sure that the L and R lights come on.

NOTE: The Auxiliary Power Unit (APU) light will also come on.

SUBTASK 26-21-01-741-002

(3) Set the EXT TEST switch, on the P8-1 panel, to the 2 position.

(a) Make sure that the L and R lights come on.

NOTE: The APU light will also come on.

SUBTASK 26-21-01-741-003

(4) Release the EXT TEST switch.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE EXTINGUISHING SYSTEM - INSPECTION/CHECK

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has an inspection of these items:

(1) Engine Fire Bottle.

(2) Engine fire extinguisher discharge tubes.

TASK 26-21-01-210-801

2. Engine Fire Extinguishing System Inspection

(Figure 601)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
78-31-00-010-801-F00	Open the Thrust Reverser (Selection) (P/B 201)
78-31-00-010-804-F00	Close the Thrust Reverser (Selection) (P/B 201)

B. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
413	Engine 1 - Fan Cowl, Left
414	Engine 1 - Fan Cowl, Right
415	Engine 1 - Thrust Reverser, Left
416	Engine 1 - Thrust Reverser, Right
423	Engine 2 - Fan Cowl, Left
424	Engine 2 - Fan Cowl, Right
425	Engine 2 - Thrust Reverser, Left
426	Engine 2 - Thrust Reverser, Right

C. Prepare for Inspection

SUBTASK 26-21-01-010-001

WARNING

DO THESE SPECIFIED TASKS IN THE CORRECT SEQUENCE BEFORE YOU OPEN THE THRUST REVERSERS: RETRACT THE LEADING EDGE, DO THE DEACTIVATION PROCEDURES FOR THE LEADING EDGE AND THE THRUST REVERSERS (FOR GROUND MAINTENANCE), AND OPEN THE FAN COWL PANELS. IF YOU DO NOT OBEY THE ABOVE SEQUENCE, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Open the Thrust Reverser (Selection), TASK 78-31-00-010-801-F00.

D. Procedure

SUBTASK 26-21-01-210-001

(1) Make sure the fire bottles are not damaged.

SUBTASK 26-21-01-210-002

(2) Make sure the extinguisher tubes are not damaged.

SUBTASK 26-21-01-210-003

(3) Make sure the tubing outlets are free of obstructions.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

E. Put the Airplane Back to Its Usual Condition

SUBTASK 26-21-01-010-002

WARNING OBEY THE INSTRUCTIONS IN THE PROCEDURE TO CLOSE THE THRUST REVERSERS. IF YOU DO NOT OBEY THE INSTRUCTIONS, INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT CAN OCCUR.

(1) Do this task: Close the Thrust Reverser (Selection), TASK 78-31-00-010-804-F00.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE)

A

H58750 S0006568259_V2

Engine Fire Extinguishing Bottle Inspection
Figure 601/26-21-01-990-803 (Sheet 1 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

H58755 S0006568260_V3

Engine Fire Extinguishing Bottle Inspection
Figure 601/26-21-01-990-803 (Sheet 2 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G28064 S0006568244_V3

Engine Fire Extinguishing Bottle Inspection
Figure 601/26-21-01-990-803 (Sheet 3 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G28137 S0006568243_V3

Engine Fire Extinguishing Bottle Inspection
Figure 601/26-21-01-990-803 (Sheet 4 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE EXTINGUISHER BOTTLE SQUIB - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the engine fire extinguisher squib

(2) An installation of the engine fire extinguisher squib.

TASK 26-21-02-000-801

2. Engine Fire Extinguisher Bottle Squib Removal

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

WARNING

DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSON AND DAMAGE EQUIPMENT.

(1) The squibs are installed on the engine fire extinguishing bottles, located in the left main landing gear wheel well. The removal procedure is the same for each squib, but each squib has a unique location and they are not interchangeable.

(2) This task gives instructions to remove the engine fire extinguisher bottle squib.

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)

C. Tools/Equipment

Reference	Description
STD-1168	Cap - Shorting or Faraday Cap

D. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

E. Prepare for the Removal

SUBTASK 26-21-02-860-006

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-02-860-008

WARNING	DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Before the squib [2] or squib [3] is touched, do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

F. Engine Fire Extinguisher Bottle Squib Removal

SUBTASK 26-21-02-020-001

(1) Disconnect the applicable electrical connector [1] from the squib [2] or squib [3].

NOTE: The squibs are not interchangeable and each squib has a unique location on the discharge port.

SUBTASK 26-21-02-020-005

WARNING	DO NOT MOVE OR TOUCH THE CARTRIDGE WITHOUT A SHORTING CAP OR FARADAY CAP INSTALLED ON THE ENDS OF THE SQUIB. THE SQUIB IS AN EXPLOSIVE DEVICE. ACCIDENTAL OPERATION OF THE SQUIB CAN CAUSE INJURY TO PERSONS.

CAUTION	DO NOT PUT SHUNT PLUGS ON THE FIRE BOTTLE SQUIBS. THE SHUNT PLUGS CAN CAUSE DAMAGE TO THE SQUIB PINS.

(2) Install the shorting or faraday cap, STD-1168, on the squib [2] or squib [3].

NOTE: The shorting caps are attached to the fire extinguishing bottles. These shorting caps prevent the squibs from possible activation due to static electricity.

SUBTASK 26-21-02-020-006

(3) Remove the lockwire between the squib [2] or squib [3] and discharge outlet.

SUBTASK 26-21-02-020-003

(4) Remove the squib [2] or squib [3] from the discharge head.

SUBTASK 26-21-02-020-004

(5) Remove and discard the packing [4].

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE)

A

F70367 S0006568265_V2

Engine Fire Extinguishing Bottle Squib Installation
Figure 401/26-21-02-990-801 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

ENGINE FIRE EXTINGUISHING BOTTLE (EXAMPLE)

B

1 EACH SQUIB HAS A UNIQUE LOCATION AND THEY ARE NOT INTERCHANGEABLE.

F70370 S0006568266_V4

Engine Fire Extinguishing Bottle Squib Installation
Figure 401/26-21-02-990-801 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-21-02-400-801

3. Engine Fire Extinguisher Bottle Squib - Installation

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives instructions to install the engine fire extinguisher bottle squib.

(2) The squibs are installed on the engine fire extinguishing bottles, found in the left main wheel well. The installation procedure is the same for each squib, but each squib has a unique location and they are not interchangeable.

B. References

Reference	Title
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536
STD-1079	Resistor - 10K Ohm or Greater
STD-1168	Cap - Shorting or Faraday Cap

D. Consumable Materials

Reference	Description	Specification
D00652	Lubricant - O-Ring - Parker Super-O-Lube	
D50287	Lubricant - O-Ring, Drilube 822 (MMS-N306A)	
G02392 [P05-262]	Lockwire - MS20995C32, Corrosion Resistant Steel - 0.032 Inch (0.8121 mm) Diameter	NASM20995

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
2	Squib	26-21-60-01-058	LOM ALL
3	Squib	26-21-60-01-033	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

AMM Item	Description	AIPC Reference	AIPC Effectivity
4	Packing	26-21-60-01-047	LOM ALL
		26-21-60-01-063	LOM ALL

F. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
211	Flight Compartment - Left
212	Flight Compartment - Right

G. Prepare for the Installation

SUBTASK 26-21-02-860-007

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

H. Engine Fire Extinguisher Bottle Squib Installation

SUBTASK 26-21-02-420-001

(1) Do these steps to install the squib [2] or squib [3] into the discharge port of the fire extinguishing bottle:

NOTE: The squibs are not interchangeable and each squib has a unique location on the discharge port.

WARNING

DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Before the squib [2] or squib [3] is touched, do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

(b) Lubricate a new packing [4] with O-ring lubricant, D50287, or Parker Super-O-Lube lubricant, D00652.

(c) Put the packing [4] on the squib [2] or squib [3].

(d) Install the squib [2] or squib [3] into the fire bottle.

1) Tighten the squib [2] or squib [3] to 90 in-lb (10.2 N·m) - 100 in-lb (11.3 N·m).

2) Install MS20995C32 lockwire, G02392 [P05-262], between the squib [2] or squib [3] and discharge outlet.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-02-700-001

> **WARNING** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN FIRE SUDDENLY AND CAUSE INJURY TO PERSONNEL.

(2) Do these steps to make sure that there is no stray voltage at the electrical squib connector

Fire Bottle Squib Electrical Connector

	Engine	APU	Cargo
Connector Pins	3 and 4, and 6 and 7	3 and 4	1 and 2

(a) Connect the digital/analog multimeter, COM-1793, across the two pins.

(b) Make sure that the current is less than 5 milliamps AC, and less than 5 milliamps DC.

(c) Connect a resistor, STD-1079, across the multimeter probes.

(d) Make sure that the voltage is less than .250 volts AC, and less than 0.250 volts DC.

(e) If it is necessary, repeat the steps above for the other squib electrical connectors.

(f) Disconnect the multimeter.

SUBTASK 26-21-02-420-003

(3) Remove the shorting or faraday cap, STD-1168, from the squib [2] or squib [3].

SUBTASK 26-21-02-420-002

> **CAUTION** MAKE SURE THAT THE SQUIB PINS CORRECTLY ENGAGE THE ELECTRICAL CONNECTOR. IF NOT, DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.

(4) Connect the electrical connector [1] to the squib [2] or squib [3].

I. Engine Fire Extinguisher Squib Installation Test

SUBTASK 26-21-02-860-005

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-21-02-740-001

(2) Put and hold the EXT TEST switch, on the P8-1 panel, to the 1 position.

(a) Make sure that the L and R lights come on.

NOTE: The APU light will also come on.

SUBTASK 26-21-02-740-002

(3) Put and hold the EXT TEST switch, on the P8-1 panel, to the 2 position.

(a) Make sure that the L and R lights come on.

NOTE: The APU light will also come on.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-21-02-710-002

(4) Release the EXT TEST switch.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU FIRE EXTINGUISHING - MAINTENANCE PRACTICES

1. General

A. This procedure has these tasks:

(1) APU fire extinguishing system - deactivation.

(2) APU fire extinguishing system - activation.

TASK 26-22-00-040-801

2. APU Fire Extinguishing System - Deactivation

A. General

(1) This task will deactivate the APU fire extinguishing system.

B. Tools/Equipment

Reference	Description
STD-858	Tag - DO NOT OPERATE

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left
315	APU Compartment - Left
316	APU Compartment - Right
411	Engine 1 - Engine
421	Engine 2 - Engine

D. Procedure

SUBTASK 26-22-00-020-004

(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-22-00-420-003

(2) Put a DO NOT OPERATE tag, STD-858 on the APU fire handle on the P8-1 panel.

E. APU Fire Extinguishing System - Tryout

NOTE: This tryout is to make sure that the power to the APU fire extinguishing system is in a zero energy state.

SUBTASK 26-22-00-020-005

(1) Remove the DO NOT OPERATE tag, STD-858 from the APU fire handle on the P8-1 panel.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-22-00-210-002

(2) Push the manual override button and pull the APU fire extinguishing handle on the P8-1 panel.

SUBTASK 26-22-00-210-003

(3) Turn the APU handle in either direction.

(a) Make sure that the APU BOTTLE DISCHARGED light on the P8-1 panel stays off.

SUBTASK 26-22-00-210-004

(4) Turn and set the APU handle back to its initial position.

SUBTASK 26-22-00-210-006

(5) Put a DO NOT OPERATE tag, STD-858 on the APU fire handle on the P8-1 panel.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CAPTAIN'S FIRE WARNING SWITCH (P7)
(FIRST OFFICER'S IS OPPOSITE)

A

CAPTAIN'S WARNING
LIGHTS (P7)

B

ENGINE AND APU FIRE CONTROL PANEL (P8)

C

G20362 S0006568238_V3

APU Fire Extinguishing System
Figure 201/26-22-00-990-803

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-22-00-440-801

3. APU Fire Extinguishing System - Activation

(Figure 201)

A. General

(1) This task will activate the APU fire extinguishing system.

B. Tools/Equipment

Reference	Description
STD-858	Tag - DO NOT OPERATE

C. Location Zones

Zone	Area
133	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Left
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left
315	APU Compartment - Left
316	APU Compartment - Right
411	Engine 1 - Engine
421	Engine 2 - Engine

D. Procedure

SUBTASK 26-22-00-420-004

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	20	C00297	FIRE PROTECTION EXTINGUISHERS RIGHT
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU
B	22	C00296	FIRE PROTECTION EXTINGUISHERS LEFT
B	23	C01022	FIRE PROTECTION EXTINGUISHERS ALTN R
B	24	C01021	FIRE PROTECTION EXTINGUISHERS ALTN L

SUBTASK 26-22-00-020-007

(2) Remove the DO NOT OPERATE tag, STD-858, from the APU fire handle on the P8-1 panel.

SUBTASK 26-22-00-710-007

(3) Put and hold the EXT TEST switch on the P8-1 panel to 1.

(a) Make sure the APU light comes on.

NOTE: The L and R lights will also come on.

SUBTASK 26-22-00-710-008

(4) Put and hold the EXT TEST switch on the P8-1 panel to 2.

(a) Make sure the APU light comes on.

NOTE: The L and R lights will also come on.

SUBTASK 26-22-00-710-009

(5) Release the EXT TEST switch.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU FIRE EXTINGUISHING - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

(1) A test of the APU fire bottle squib circuit.

(2) A test of the APU fire bottle pressure switch circuit.

(3) An APU fire handle system shutdown test.

TASK 26-22-00-730-801

2. APU Fire Extinguishing Bottle Squib Circuit Test

(Figure 501)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
49-11-00-860-802	APU Usual Shutdown (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536
SPL-1655	Test Equipment - APU/Engine Fire Detection System Part #: C26005-1 Supplier: 81205
SPL-1663	Test Equipment - Fire Extinguishing System Part #: F80229-69 Supplier: 81205 Opt Part #: F80229-15 Supplier: 81205

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Reference	Description
SPL-10039	Cable Assy - Fire Extinguishing System Test Equipment Part #: F80229-20 Supplier: 81205 Part #: F80229-48 Supplier: 81205 Part #: F80229-59 Supplier: 81205 Part #: F80229-61 Supplier: 81205
SPL-10040	Shorting Plug - Fire Extinguishing System Test Equipment Part #: F80229-52 Supplier: 81205
STD-1079	Resistor - 10K Ohm or Greater

C. Consumable Materials

Reference	Description	Specification
G50414	Lockwire - MS20995CY15, Copper - 0.015 Inch (0.381 mm) Diameter	NASM20995

D. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

E. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

F. Prepare for the Test

SUBTASK 26-22-00-860-001

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-860-027

(2) Open these access panels:

Number	Name/Location
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

SUBTASK 26-22-00-020-001

WARNING DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) Before you touch the squib, do these tasks for devices that are sensitive to electrostatic discharge:

- ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
- ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-22-00-020-008

(4) Disconnect electrical connector D594 from the squib.

SUBTASK 26-22-00-020-002

WARNING PUT A PROTECTIVE CAP ON THE SQUIBS. IF YOU DO NOT PUT A PROTECTIVE CAP ON THE SQUIBS, THE FIRE BOTTLE CAN RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS.

(5) Install a shorting plug, SPL-10040, to the squib.

SUBTASK 26-22-00-860-002

(6) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-480-001

(7) Set the toggle switch, on Fire System Test Equipment, SPL-1663, to the ON position.

SUBTASK 26-22-00-760-001

(8) Measure the resistance (RL) of the test box with a digital/analog multimeter, COM-1793, connected to the voltmeter jacks.

(a) Write down the value of RL.

SUBTASK 26-22-00-480-002

(9) Set the toggle switch, on the test box, to the OFF position.

SUBTASK 26-22-00-480-003

(10) Set the multimeter to read DC volts.

SUBTASK 26-22-00-480-004

(11) Connect the applicable cable assembly, SPL-10039, to the connector on the test box.

NOTE: Look at the placard on the test box lid to determine the applicable adapter.

G. APU Fire Extinguishing Bottle Squib Circuit Test

SUBTASK 26-22-00-730-001

(1) Push the manual override button and pull the APU fire handle, on the P8-1 panel.

SUBTASK 26-22-00-480-005

(2) Connect the adapter cable to the squib electrical connector.

SUBTASK 26-22-00-860-020

(3) Turn the APU fire handle and hold it in the CW (Clockwise) direction.

(a) Make sure that the BOTTLE DISCHARGE light, on the test box, comes on.

(b) Write down the voltage shown on the multimeter as (V_1) in Table 501.

(c) Set the switch, on the test box, to the ON position.

(d) Write down the voltage shown on the multimeter as (V_2) in Table 501.

SUBTASK 26-22-00-860-021

(4) Release the fire handle.

(a) Make sure that the handle moves toward the center 10°arc (0.2 rad).

(b) Make sure that the multimeter shows 0 (±2) V (Volts).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(c) Set the switch, on the test box, to the OFF position.

SUBTASK 26-22-00-760-002

(5) Calculate the resistance R_C of the squib discharge circuit using this formula:

$R_C = RL (V_1/V_2) - RL$.

(a) Make sure that R_C is less than or equal to 5 ohms.

NOTE: If R_C is more than 5 ohms, the circuit can not supply enough current to fire the squib cartridge.

Table 501/26-22-00-993-801 APU Fire Extinguishing Bottle Squib Circuit Test Results

CONNECTOR	RL	V1	V2	R_C
D594				

SUBTASK 26-22-00-860-022

(6) Turn the APU fire handle and hold it in the CCW (Counterclockwise) direction.

(a) Make sure that the BOTTLE DISCHARGE light, on the test box, comes on.

(b) Write down the voltage shown on the multimeter as (V_1) in Table 502.

(c) Set the switch, on the test box, to the ON position.

(d) Write down the voltage shown on the multimeter as (V_2) in Table 502.

SUBTASK 26-22-00-860-023

(7) Release the fire handle.

(a) Make sure that the handle moves toward the center 10°arc (0.2 rad).

(b) Make sure that the multimeter shows 0 (±2) V.

(c) Set the switch, on the test box, to the OFF position.

SUBTASK 26-22-00-760-003

(8) Calculate the resistance R_C of the squib discharge circuit using this formula:

$R_C = RL (V_1/V_2) - RL$.

(a) Make sure that R_C is less than or equal to 5 ohms.

NOTE: If R_C is more than 5 ohms, the circuit can not supply enough current to fire the squib cartridge.

Table 502/26-22-00-993-802 APU Fire Extinguishing Bottle Squib Circuit Test Results

CONNECTOR	RL	V1	V2	R_C
D594				

SUBTASK 26-22-00-720-002

(9) Return the APU fire handle to its usual (stowed) position.

H. APU Fire Extinguishing Bottle Squib Circuit Check with the Remote APU Control Panel

SUBTASK 26-22-00-730-002

(1) Pull the handle, on the P28 remote APU control panel, in the right main gear wheel well.

SUBTASK 26-22-00-860-024

(2) Push and hold the BOTTLE DISCHARGE toggle switch.

(a) Make sure that the BOTTLE DISCHARGE light, on the test box, comes on.

(b) Write down the voltage shown on the multimeter as (V_1) in Table 503.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(c) Set the switch, on the test box, to the ON position.

(d) Write down the voltage shown on the multimeter as (V_2) in Table 503.

SUBTASK 26-22-00-860-025

(3) Release the BOTTLE DISCHARGE toggle switch.

(a) Make sure that the multimeter shows 0 (±2) V.

SUBTASK 26-22-00-760-004

(4) Calculate the resistance R_C of the squib discharge circuit using this formula:

R_C = RL (V_1/V_2) - RL.

(a) Make sure that R_C is less than or equal to 5 ohms.

NOTE: If R_C is more than 5 ohms, the circuit can not supply enough current to fire the squib cartridge.

Table 503/26-22-00-993-803 APU Fire Extinguishing Bottle Squib Circuit Test Results

CONNECTOR	RL	V1	V2	R_C
D594				

SUBTASK 26-22-00-720-001

(5) Put the handle, on the P28 remote APU control panel, in the usual position.

LOM 450

I. APU Fire Bottle Automatic Extinguishing Function Check

SUBTASK 26-22-00-860-026

(1) Make sure that the APU is not running (TASK 49-11-00-860-802).

SUBTASK 26-22-00-010-001

(2) To get access to the APU compartment, open these access panels:

Number	Name/Location
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

SUBTASK 26-22-00-480-006

(3) Connect the test box equipment, SPL-1655, to the terminal lug of the APU LOWER Fire Detector, M1756, and airplane ground.

(a) Make sure that all the toggle switches, on the test box, are in the NORMAL positions.

(b) Connect one alligator clip to the responder bracket or to a grounding lug.

(c) Connect the other alligator clip to the responder lug.

SUBTASK 26-22-00-760-005

(4) Make sure that the multimeter shows 0 (±2) V.

SUBTASK 26-22-00-760-006

(5) Move the APU LOOP FIRE switches, on the equipment, SPL-1655, test box, to the FIRE position.

(a) After 10 seconds, make sure that the BOTTLE DISCHARGE light, on the Fire System Test Equipment, SPL-1663, test box, comes on.

(b) Write down the voltage shown on the multimeter as (V_1) in Table 504.

(c) Set the switch, on the Fire System Test Equipment, SPL-1663, test box, to the ON position.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 450 (Continued)

(d) Write down the voltage shown on the multimeter as (V_2) in Table 504.

SUBTASK 26-22-00-760-007

(6) Calculate the resistance R_C of the squib discharge circuit using this formula:

$R_C = RL (V_1/V_2) - RL$.

(a) Make sure that R_C is less than or equal to 5 ohms.

NOTE: If R_C is more than 5 ohms, the circuit can not supply enough current to fire the squib cartridge.

Table 504/26-22-00-993-804 APU Fire Extinguishing Bottle Squib Circuit Test Results

CONNECTOR	RL	V1	V2	R_C
D594				

SUBTASK 26-22-00-760-008

(7) Move the APU LOOP FIRE switches, on the equipment, SPL-1655, test box, to the NORMAL position.

SUBTASK 26-22-00-080-002

(8) Disconnect the equipment, SPL-1655, test box, from the terminal lug of the APU Fire Detector, M1756, and the airplane ground.

SUBTASK 26-22-00-410-001

(9) Close this access panel:

Number	Name/Location
311BL	Stabilizer Trim Access Door

LOM ALL

J. Put the Airplane Back to its Usual Condition

SUBTASK 26-22-00-080-003

(1) Disconnect the Fire System Test Equipment, SPL-1663, test box, from the squib connector.

SUBTASK 26-22-00-430-001

(2) Install single strand copper MS20995CY15 lockwire, G50414, on the bottle discharge switch on the APU remote fire panel.

SUBTASK 26-22-00-865-001

(3) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-090-001

(4) Remove the shorting plug, SPL-10040, from the squibs.

SUBTASK 26-22-00-700-001

WARNING MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN FIRE SUDDENLY AND CAUSE INJURY TO PERSONNEL.

(5) Do these steps to make sure that there is no stray voltage at the electrical squib connector

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Fire Bottle Squib Electrical Connector

	Engine	APU	Cargo
Connector Pins	3 and 4, and 6 and 7	3 and 4	1 and 2

(a) Connect the digital/analog multimeter, COM-1793, across the two pins.

(b) Make sure that the current is less than 5 milliamps AC, and less than 5 milliamps DC.

(c) Connect a resistor, STD-1079, across the multimeter probes.

(d) Make sure that the voltage is less than .250 volts AC, and less than 0.250 volts DC.

(e) If it is necessary, repeat the steps above for the other squib electrical connectors.

(f) Disconnect the multimeter.

SUBTASK 26-22-00-430-002

(6) Connect the D594 to the squib.

SUBTASK 26-22-00-410-004

(7) Close these access panels:

Number	Name/Location
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

SUBTASK 26-22-00-865-002

(8) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-710-004

(9) Set the EXT TEST switch to the 1 position.

(a) Make sure that the APU light comes on.

NOTE: The L and R lights should also come on.

SUBTASK 26-22-00-710-005

(10) Set the EXT TEST switch to the 2 position.

(a) Make sure that the APU light comes on.

NOTE: The L and R lights should also come on.

SUBTASK 26-22-00-710-006

(11) Release the EXT TEST switch.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CAPTAIN'S FIRE WARNING SWITCH (P7) (FIRST OFFICER'S IS OPPOSITE)

A

CAPTAIN'S WARNING LIGHTS (P7)

B

FIRE CONTROL PANEL (P8-1)

C

G20366 S0006568272_V2

APU Fire Detection Test
Figure 501/26-22-00-990-801 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G20371 S0006568273_V2

APU Fire Detection Test
Figure 501/26-22-00-990-801 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-22-00-730-802

3. APU Fire Extinguishing Bottle Pressure Switch Circuit Test

(Figure 501)

A. General

(1) The pressure switch test should be performed every time the fire control module, or pressure switch is disconnected from the airplane wiring.

B. Location Zones

Zone	Area
211	Flight Compartment - Left
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

C. APU Fire Extinguishing Bottle Pressure Switch Test

SUBTASK 26-22-00-860-028

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-020-003

(2) Disconnect electrical connector D1176 from the pressure switch on the APU fire bottle.

SUBTASK 26-22-00-730-003

(3) Do a test of the APU fire bottle pressure switch circuit.

(a) Connect a jumper wire between pins 1 and 2 on D1176.

1) Make sure the APU BOTTLE DISCHARGED light on the fire control module comes on.

(b) Remove the jumper from connector D1176.

SUBTASK 26-22-00-420-002

(4) Connect D1176 to the pressure switch on the APU fire bottle.

SUBTASK 26-22-00-860-029

(5) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

END OF TASK

TASK 26-22-00-720-801

4. APU Fire Switch System Shutdown Test

(Figure 502)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This procedure checks that fuel to the Auxiliary Power Unit (APU) is shut off and the APU generator is disconnected from the airplane power when the fire handle is pulled.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

B. References

Reference	Title
24-22-00-860-815	Supply APU Generator Power (P/B 201)

C. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right
211	Flight Compartment - Left
212	Flight Compartment - Right
315	APU Compartment - Left
316	APU Compartment - Right

D. APU Fire Handle Fuel System Shutdown Test

SUBTASK 26-22-00-860-005

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-860-006

(2) Make sure that these circuit breakers are closed:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
A	21	C00396	FIRE PROT DETECTION MA WRN & CONT
A	22	C00407	FIRE PROTECTION DETECTION ENG 2
A	23	C00403	FIRE PROTECTION DETECTION APU
A	24	C00405	FIRE PROTECTION DETECTION ENG 1
B	19	C01344	APU FIRE SW POWER

F/O Electrical System Panel, P6-3

Row	Col	Number	Name
B	12	C00132	MASTER CAUTION ANNUNCIATOR BUS 1
B	13	C00131	MASTER CAUTION ANNUNCIATOR BAT
D	11	C00133	INDICATOR MASTER DIM DIM/TST CONT
D	12	C00310	INDICATOR MASTER DIM BAT
D	13	C00311	INDICATOR MASTER DIM BUS 1
D	14	C00312	INDICATOR MASTER DIM BUS 2
D	15	C01401	LANDING GEAR AIR/GND RELAY
E	11	C00313	INDICATOR MASTER DIM SECT 1
E	12	C00314	INDICATOR MASTER DIM SECT 2
E	13	C00315	INDICATOR MASTER DIM SECT 3
E	14	C00316	INDICATOR MASTER DIM SECT 4
F	11	C00317	INDICATOR MASTER DIM SECT 5
F	12	C00318	INDICATOR MASTER DIM SECT 6

SUBTASK 26-22-00-860-013

(3) Pull the APU fire handle, on the P8 panel.

(a) Make sure that the fire handle does not extend.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-22-00-860-008

(4) Do a test of the APU fire handle fuel shutdown circuit in the flight compartment.

(a) Set the APU master switch, on the P5 panel, to the ON position.

NOTE: The igniter plugs will fire three times. Do not start the APU.

1) Make sure that the APU fuel supply valve in the left main gear wheel well is opened (Figure 502).

(b) Push the manual override button and pull the APU fire handle, on the P8 panel.

1) Make sure that the APU fuel supply valve in the left main gear wheel well is closed.

(c) Push in the APU fire handle, on the P8 panel, to the usual position.

(d) Set the APU master switch, on the P5 panel, to the OFF position.

SUBTASK 26-22-00-860-009

(5) Use the remote APU control panel to check the APU fire handle fuel shutoff circuit.

(a) Set the APU master switch, on the P5 panel, to the ON position.

1) Make sure that the APU fuel supply valve in the left main gear wheel well is opened.

(b) Pull the handle, on the P28 remote APU control panel, in the right main gear wheel well.

1) Make sure that the APU fuel supply valve in the left main gear wheel well is closed.

(c) Push the handle, on the remote APU control panel, to the usual position.

(d) Set the APU master switch, on the P5 panel, to the OFF position.

E. APU P8 Panel Fire Handle Generator Shutdown Test

SUBTASK 26-22-00-860-014

(1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-860-015

(2) Do this task: Supply APU Generator Power, TASK 24-22-00-860-815.

SUBTASK 26-22-00-860-016

(3) Set the Alternating Current (AC) meter select switch, on the P5-13 panel, to APU GEN.

(a) Make sure that the voltage reads 110-120 Alternating Current Volts (VAC).

(b) Make sure that the frequency reads 390-410.

SUBTASK 26-22-00-860-017

CAUTION DO NOT TURN THE FIRE HANDLE. THE EXTINGUISHER BOTTLES WILL DISCHARGE AND CAUSE DAMAGE TO THE ENGINE IF YOU TURN THE FIRE HANDLE.

(4) Push the manual override button and pull the APU fire handle, on the P8 panel.

NOTE: The APU will do an emergency shutdown. When the APU does an emergency shutdown, it will not do the cool-down cycle.

(a) Make sure that the voltage and frequency read 0 after 7 seconds.

SUBTASK 26-22-00-860-018

(5) Set the APU and fire protection circuits to the usual positions.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) Set the APU master switch to the OFF position.

(b) Push the APU fire handle to its usual position.

(c) Set the APU master switch to the ON position.

(d) After 30 seconds, make sure that the APU FAULT light goes off.

(e) Make sure that the APU annunciator light goes off.

(f) Push and release the APU annunciator light.

(g) Make sure that the L and R MASTER CAUTION lights go off.

NOTE: The L and R MASTER CAUTION lights stay on if the airplane finds other system faults.

(h) Set the APU master switch to the OFF position.

F. APU P28 Remote Panel Fire Handle Generator Shutdown Test

SUBTASK 26-22-00-860-031

(1) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

SUBTASK 26-22-00-860-037

(2) Do this task: Supply APU Generator Power, TASK 24-22-00-860-815.

SUBTASK 26-22-00-860-033

(3) Set the AC meter select switch, on the P5-13 panel, to APU GEN.

(a) Make sure that the voltage reads 110-120 VAC.

(b) Make sure that the frequency reads 390-410.

SUBTASK 26-22-00-860-034

CAUTION

DO NOT TURN THE FIRE HANDLE. THE EXTINGUISHER BOTTLES WILL DISCHARGE AND CAUSE DAMAGE TO THE ENGINE IF YOU TURN THE FIRE HANDLE.

(4) Pull the handle, on the P28 remote APU control panel, in the right main gear wheel well.

NOTE: The APU will do an emergency shutdown. When the APU does an emergency shutdown, it will not do the cool-down cycle.

(a) Make sure that the voltage and frequency read 0 after 7 seconds.

SUBTASK 26-22-00-860-035

(5) Set the APU and fire protection circuits to the usual positions.

(a) Set the APU master switch to the OFF position.

(b) Push the APU fire handle to its usual position.

(c) Set the APU master switch to the ON position.

(d) After 30 seconds, make sure that the APU FAULT light goes off.

(e) Make sure that the APU annunciator light goes off.

(f) Push and release the APU annunciator light.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(g) Make sure that the L and R MASTER CAUTION lights go off.

NOTE: The L and R MASTER CAUTION lights stay on if the airplane finds other system faults.

(h) Set the APU master switch to the OFF position.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

MAIN LANDING GEAR WHEEL WELL
(LEFT SIDE)

G20382 S0006568276_V2

APU Fuel Shutoff Valve Actuator Test
Figure 502/26-22-00-990-802

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU FIRE EXTINGUISHING BOTTLE - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the APU fire extinguishing bottle

(2) An installation of the APU fire extinguishing bottle.

B. The APU fire extinguishing bottle is installed forward of the APU fire wall. You can get access to the bottle through the Aft Unpressurized Compartment Access Door, 311BL.

TASK 26-22-01-000-801

2. APU Fire Extinguishing Bottle Removal

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives instructions to remove the Auxiliary Power Unit (APU) fire extinguishing bottle [3].

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)

C. Tools/Equipment

Reference	Description
STD-858	Tag - DO NOT OPERATE
STD-1168	Cap - Shorting or Faraday Cap

D. Location Zones

Zone	Area
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

E. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

F. Prepare for the Removal

SUBTASK 26-22-01-860-004

(1) Make sure that the APU master switch on the P5 overhead panel is in the OFF position and install a DO NOT OPERATE tag, STD-858.

SUBTASK 26-22-01-860-001

(2) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-22-01-010-007

(3) Open this access door:

Number	Name/Location
311BL	Stabilizer Trim Access Door

G. APU Fire Extinguishing Bottle Removal

SUBTASK 26-22-01-020-005

WARNING DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(1) Before you touch the squib [7], do the procedure for devices that are sensitive to electrostatic discharge.

(a) These are the tasks:

- ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
- ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802

SUBTASK 26-22-01-020-006

(2) Disconnect the electrical connector [1] from the squib [7].

NOTE: The squib is also known as cartridge.

SUBTASK 26-22-01-420-014

WARNING DO NOT MOVE OR TOUCH THE CARTRIDGE WITHOUT A SHORTING CAP OR FARADAY CAP INSTALLED ON THE ENDS OF THE SQUIB. THE SQUIB IS AN EXPLOSIVE DEVICE. ACCIDENTAL OPERATION OF THE SQUIB CAN CAUSE INJURY TO PERSONS.

CAUTION DO NOT PUT SHUNT PLUGS ON THE FIRE BOTTLE SQUIBS. THE SHUNT PLUGS CAN CAUSE DAMAGE TO THE SQUIB PINS.

(3) Install protective cap [6] or shorting or faraday cap, STD-1168 on each squib [7].

NOTE: Protective caps, or shorting or faraday caps prevent the squibs from possible activation due to static electricity.

NOTE: Protective caps are supplied with the fire extinguishing bottles and shorting or faraday cap, STD-1168, can be used as alternative to protective caps.

SUBTASK 26-22-01-020-007

(4) Disconnect the electrical connector [2] from the pressure switch [12].

SUBTASK 26-22-01-020-008

(5) Loosen the nut [10] on the hose assembly [9].

SUBTASK 26-22-01-020-009

(6) Disconnect the hose assembly [9] from the discharge head [11].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-22-01-420-006

(7) Install protective caps on each of the discharge outlets.

NOTE: Protective caps are supplied with the fire extinguishing bottles.

SUBTASK 26-22-01-420-007

(8) Install protective caps on each of the discharge tubes.

SUBTASK 26-22-01-020-010

(9) Remove the bolts [4] and washers [5] from the mounting lugs.

SUBTASK 26-22-01-020-011

WARNING

BE CAREFUL WHEN YOU MOVE THE FIRE EXTINGUISHING BOTTLE. THE FIRE EXTINGUISHING BOTTLE IS HIGHLY PRESSURIZED AND HAS AN EXPLOSIVE SQUIB AS A COMPONENT. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(10) Remove the fire extinguishing bottle [3].

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Auxiliary Power Unit (APU) Fire Extinguishing Bottle Installation
Figure 401/26-22-01-990-801 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU FIRE EXTINGUISHING BOTTLE

C

2 THESE TWO PROTECTIVE CAPS STAY INSTALLED ON THE FIRE EXTINGUISHING BOTTLE FOR THE WEIGHING.

3036187 S0000805534_V2

Auxiliary Power Unit (APU) Fire Extinguishing Bottle Installation
Figure 401/26-22-01-990-801 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-22-01-400-801

3. APU Fire Extinguishing Bottle Installation

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
26-20-00-210-801	APU Fire Extinguishing Bottle Check (P/B 601)
26-22-00-730-802	APU Fire Extinguishing Bottle Pressure Switch Circuit Test (P/B 501)
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536
COM-17114	Gauge - Force Part #: FDIX 100 Supplier: 0BFD9 Part #: FDIX 50 Supplier: 0BFD9 Opt Part #: FDI 100 Supplier: 0BFD9 Opt Part #: FDI 50 Supplier: 0BFD9 Opt Part #: FDV 100 Supplier: 0BFD9 Opt Part #: FDV 50 Supplier: 0BFD9

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Reference	Description
STD-1079	Resistor - 10K Ohm or Greater
STD-1168	Cap - Shorting or Faraday Cap

C. Consumable Materials

Reference	Description	Specification
A50110	Sealant - Fuel Tank	BMS5-45 Class B-2
A50155	Sealant - Fuel Tank	BMS5-45 Class C
A50231	Sealant - Pressure And Environmental - Chromate Type	BMS5-95 Class B
A50296	Sealant - Pressure And Environmental - Chromate Type	BMS5-95 Class C
B50073	Alcohol - Isopropyl	ASTM D 770
D50004	Compound - Antiseize	BMS3-28
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)
G01048	Lockwire - MS20995C32, Corrosion Resistant Steel - 0.032 Inch (0.8128 mm) Diameter	NASM20995
G50136	Compound - Corrosion Inhibiting, Non-drying Paste	BMS3-38
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38
G50260	Sandpaper - Aluminum Oxide, 220 Grit	

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Fire extinguishing bottle	26-22-01-01-025	LOM ALL
6	Protective cap	26-22-02-01-065	LOM ALL
7	Squib	26-22-02-01-060	LOM ALL
8	Cap	26-22-01-01-005	LOM ALL
9	Hose assembly	26-22-01-01-010	LOM ALL
10	Nut	Not Specified	
11	Discharge head	26-22-02-01-070	LOM ALL
		26-22-02-01-160	LOM ALL
12	Pressure switch	26-22-02-01-115	LOM ALL

E. Location Zones

Zone	Area
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

F. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G. Prepare for the Installation

SUBTASK 26-22-01-700-004

(1) If the protective caps [6] are installed on the squibs [7], weigh the fire extinguishing bottle [3] as follows:

(a) Make sure that the weight of the fire extinguishing bottle [3] is ± 0.10 lb (0.05 kg) of the weight listed on the bottle data plate.

1) Use the force gauge, COM-17114, to weigh the fire extinguishing bottle [3].

2) Record the weight marked on the fire extinguishing bottle [3] as “Value A”.

3) Make sure that protective caps [6] are installed on the squibs [7] and remove the rest of protective caps from fire extinguishing bottle [3], before weighing.

NOTE: Only the weight of the protective caps located on the squibs, supplied with the fire extinguishing bottle, are included on the weight listed on the ID plate.

4) Weigh the assembly, including the charged bottle, discharge heads, squibs [7], protective caps [6] installed on the squibs [7] and record as “Value B”.

5) If the difference between the weight marked on the fire extinguishing bottle [3] ("Value A") and measured weight ("Value B") is more than 0.10 lb (0.05 kg), replace the fire extinguishing bottle [3].

SUBTASK 26-22-01-700-005

(2) If the shorting or faraday caps, STD-1168 are installed on the squibs [7], weigh the fire extinguishing bottle [3] as follows:

(a) Make sure that the weight of the fire extinguishing bottle [3] is ± 0.10 lb (0.05 kg) of the weight listed on the bottle data plate

1) Use the force gauge, COM-17114, to weigh the fire extinguishing bottle [3].

2) Weigh the shorting or faraday cap, STD-1168, including its caps and record as “Value A”.

3) Record the weight marked on the fire extinguishing bottle [3] as “Value B”.

4) Remove the remaining protective caps from the fire extinguishing bottle [3] before weighing.

5) Weigh the assembly, including the charged bottle, discharge heads, squibs [7], shorting or faraday caps, STD-1168, and protective caps [6] supplied for the squibs [7] and record as “Value C”.

NOTE: Weigh of protective caps supplied with the fire extinguishing bottle for the squibs only are included on ID plate.

6) Find the measured weight of the fire extinguishing bottle [3] by subtracting “Value A” from “Value C” and record as “Value D” (Value D = Value C - Value A).

7) If the difference between the weight marked on the fire extinguishing bottle [3] (“Value B”) and measured weight (“Value D”) is more than 0.10 lb (0.05 kg), replace the fire extinguishing bottle [3].

SUBTASK 26-22-01-860-002

(3) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-22-01-211-001

(4) If the previous bottle was discharged, check the discharge tube for any debris.

SUBTASK 26-22-01-200-001

(5) Do this task: APU Fire Extinguishing Bottle Check, TASK 26-20-00-210-801.

H. APU Fire Extinguishing Bottle Installation

SUBTASK 26-22-01-420-001

(1) Do these steps to install the fire extinguishing bottle [3]:

> **WARNING** REMOVE THE CAPS FROM THE FILL FITTING ASSEMBLY ON THE FIRE EXTINGUISHER BOTTLES. THE SAFETY RELEASE ON THE BOTTLE WILL NOT OPERATE IF THE CAPS ARE ON. IF YOU DO NOT OBEY, INJURY CAN OCCUR BECAUSE OF FIRE.

(a) Remove all caps from the fill fitting assembly on the fire extinguishing bottle [3].

> **WARNING** BE CAREFUL WHEN YOU MOVE THE FIRE EXTINGUISHING BOTTLE. THE FIRE EXTINGUISHING BOTTLE IS HIGHLY PRESSURIZED AND HAS AN EXPLOSIVE SQUIB AS A COMPONENT. ACCIDENTAL DISCHARGE OF THE FIRE EXTINGUISHING BOTTLE CAN CAUSE INJURY TO PERSONS OR DAMAGE TO EQUIPMENT.

(b) Prepare the fire extinguisher bottle lugs and the support bracket mounting surfaces for installation.

1) Remove any old sealant from the bottle lugs and the support bracket.

(c) Use sandpaper, G50260, to sand the surface of the support bracket mounting surface until any surface finish is removed.

NOTE: Avoid removing surface finish outside of the bonding area.

(d) Using a cotton wiper, G00034, and alcohol, B50073, clean the exposed surfaces of the support mounting bracket and the surfaces of the bottle mounting lugs.

(e) Immediately dry the surfaces with a new wiper.

(f) Apply one of these sealants to the surface of the bottle mounting lugs:

- sealant, A50110
- sealant, A50155
- sealant, A50231
- sealant, A50296.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(g) Make sure that sealing compound is applied on the full area of the bottle lug surface.

NOTE: The thickness of the sealing compound must be 0.0005 in. (0.013 mm). If necessary, the sealing compound thickness can be between 0.010 in. (0.254 mm) and 0.030 in. (0.762 mm) depending on fit-up of parts.

(h) Put the fire extinguishing bottle [3] in the mounted position on the support bracket.

(i) Install the bolts [4] and washers [5].

1) Make sure that there is sufficient sealant coming out at each edge of the bottle lugs.

2) Make sure that sealant squeeze out is smooth and approximately 0.06 in. (1.52 mm) along the joint.

(j) Measure the electrical bonding resistance between the fire extinguishing bottle [3] lugs and support bracket (SWPM 20-20-00).

1) Use an intrinsically safe approved bonding meter, COM-1550.

2) Make sure that the resistance is 0.0007 ohm (0.7 milliohm) or less.

a) If the resistance is more than 0.0007 ohm (0.7 milliohm), remove the fire extinguishing bottle [3] and repeat the previous steps to prepare the bottle surfaces for installation.

(k) If the discharge head [11] does not align with the hose assembly [9], do this step:

1) Loosen the discharge outlet gland nut [13] and rotate the discharge port so it aligns with the hose assembly [9].

(l) Torque the gland nut [13] to 540 in-lb (61 N·m) - 660 in-lb (75 N·m).

NOTE: Even if the discharge outlet is already aligned, the gland nut may not torqued down.

NOTE: It is not necessary to remove the lockwire and torque the gland nut if the gland nut is torqued, and the lockwire installed.

(m) Remove protective caps from each of the discharge outlets.

(n) Remove protective caps from each of the discharge tubes.

(o) Install MS20995C32 lockwire, G01048, between the gland nut [13] and discharge outlet boss.

WARNING

DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(p) Apply a layer of compound, D50004 (preferred), to the outlet threads, outlet end, and outlet inner diameter where the hose assembly [9] attaches to the discharge head [11].

1) Cor-Ban 27L Compound, G50237, or corrosion inhibiting material, G50136, are also acceptable alternatives as anti-corrosion compounds to use in this location.

(q) Connect the hose assembly [9] to the discharge head [11].

(r) Remove all unwanted compound.

(s) Torque the nut [10] to 342 in-lb (38.6 N·m) - 378 in-lb (42.7 N·m).

(t) If removed, install the cap [8] to the discharge head that is not used.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1) Torque the cap [8] to 427 in-lb (48 N·m) - 473 in-lb (53 N·m).

SUBTASK 26-22-01-710-001

(2) Do these steps to connect the electrical connector [1] to the squib [7] on the fire extinguishing bottle [3]:

> **WARNING** DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSON AND DAMAGE EQUIPMENT.

(a) Before touching the squib [7], do these tasks for devices that are sensitive to electrostatic discharge:

- ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802
- ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 26-22-01-700-002

> **WARNING** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN FIRE SUDDENLY AND CAUSE INJURY TO PERSONNEL.

(3) Do these steps to make sure that there is no stray voltage at the electrical squib connector

Fire Bottle Squib Electrical Connector

	Engine	APU	Cargo
Connector Pins	3 and 4, and 6 and 7	3 and 4	1 and 2

(a) Connect the digital/analog multimeter, COM-1793, across the two pins.

(b) Make sure that the current is less than 5 milliamps AC, and less than 5 milliamps DC.

(c) Connect a resistor, STD-1079, across the multimeter probes.

(d) Make sure that the voltage is less than .250 volts AC, and less than 0.250 volts DC.

(e) If it is necessary, repeat the steps above for the other squib electrical connectors.

(f) Disconnect the multimeter.

SUBTASK 26-22-01-020-013

(4) Remove protective cap [6] or shorting or faraday cap, STD-1168, from the applicable squib [7].

(a) Make sure that the squib [7] that is not used has a protective cap [6] installed.

SUBTASK 26-22-01-420-003

(5) Connect the electrical connector [1] to the squib [7].

NOTE: The pins of the squib can cause damage to the electrical connector if the pins do not correctly engage.

SUBTASK 26-22-01-420-002

(6) Do this task to test the electrical wiring up to the pressure switch [12]: APU Fire Extinguishing Bottle Pressure Switch Circuit Test, TASK 26-22-00-730-802.

SUBTASK 26-22-01-420-009

(7) Connect the electrical connector [2] to the pressure switch [12].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

I. APU Fire Extinguishing Bottle Installation Test

SUBTASK 26-22-01-860-003

(1) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

SUBTASK 26-22-01-741-001

(2) Set the EXT TEST switch, on the P8-1 panel, to the 1 position.

(a) Make sure that the L and R lights come on.

NOTE: The Auxiliary Power Unit (APU) light will also come on.

SUBTASK 26-22-01-741-002

(3) Set the EXT TEST switch, on the P8-1 panel, to the 2 position.

(a) Make sure that the L and R lights come on.

NOTE: The APU light will also come on.

SUBTASK 26-22-01-741-003

(4) Release the EXT TEST switch.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 26-22-01-010-002

(1) Close this access door:

Number	Name/Location
311BL	Stabilizer Trim Access Door

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU FIRE BOTTLE - INSPECTION/CHECK

1. **General**

A. This procedure has this inspection task:

(1) APU Fire Bottle.

TASK 26-22-01-210-801

2. **APU Fire Bottle Inspection**

(Figure 601)

NOTE: This procedure is a scheduled maintenance task.

A. Location Zones

Zone	Area
313	Stabilizer Torsion Box Compartment - Left
314	Stabilizer Torsion Box Compartment - Right
315	APU Compartment - Left

B. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

C. Prepare for the Inspection

SUBTASK 26-22-01-010-003

(1) Open these access panels:

Number	Name/Location
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

D. APU Fire Bottle Inspection

SUBTASK 26-22-01-210-001

(1) Make sure that the fire bottle is not damaged.

SUBTASK 26-22-01-210-003

(2) Make sure that the extinguisher tube is not damaged.

SUBTASK 26-22-01-210-004

(3) Make sure that the tubing outlet is free of obstructions.

E. Put the Airplane Back to Its Usual Condition

SUBTASK 26-22-01-010-004

(1) Close these access panels:

Number	Name/Location
311BL	Stabilizer Trim Access Door
315A	APU Cowl Door

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Auxiliary Power Unit (APU) Fire Extinguishing Bottle Inspection
Figure 601/26-22-01-990-803

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU FIRE EXTINGUISHING BOTTLE SQUIB - REMOVAL/INSTALLATION

1. **General**
   A. This procedure contains scheduled maintenance task data.
   B. This procedure has these tasks:
      (1) A removal of the APU fire extinguishing bottle squib.
      (2) An installation of the APU fire extinguishing bottle squib.

TASK 26-22-02-000-801

2. **APU Fire Extinguishing Bottle Squib Removal**
(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General
(1) This task gives instructions to remove the Auxiliary Power Unit (APU) fire extinguishing bottle squib.
(2) The APU fire extinguishing squib is installed on the fire extinguishing bottle. The APU fire extinguishing bottle is installed forward of the APU fire wall.
(a) There are two fire extinguishing squibs on the bottle.
(b) One is not used and has a protective cap installed.

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)

C. Tools/Equipment

Reference	Description
STD-1168	Cap - Shorting or Faraday Cap

D. Location Zones

Zone	Area
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

E. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

F. Prepare for the Removal

SUBTASK 26-22-02-860-001
(1) Open these circuit breakers and install safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-22-02-010-003

(2) Open this access door:

Number	Name/Location
311BL	Stabilizer Trim Access Door

SUBTASK 26-22-02-020-002

> **WARNING** DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSON AND DAMAGE EQUIPMENT.

(3) Before the squib is touched, do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

G. APU Fire Extinguishing Bottle Squib Removal

SUBTASK 26-22-02-020-001

(1) Do these steps to remove the connected squib:

(a) Disconnect the electrical connector [1] from the squib [3].

> **WARNING** DO NOT MOVE OR TOUCH THE CARTRIDGE WITHOUT A SHORTING CAP OR FARADAY CAP INSTALLED ON THE ENDS OF THE SQUIB. THE SQUIB IS AN EXPLOSIVE DEVICE. ACCIDENTAL OPERATION OF THE SQUIB CAN CAUSE INJURY TO PERSONS.

> **CAUTION** DO NOT PUT SHUNT PLUGS ON THE FIRE BOTTLE SQUIBS. THE SHUNT PLUGS CAN CAUSE DAMAGE TO THE SQUIB PINS.

(b) Install the shorting or faraday cap, STD-1168, on the squib [3].

NOTE: The shorting caps are attached to the fire extinguishing bottles. These shorting caps prevent the squibs from possible activation due to static electricity.

1) If necessary, install the shorting or faraday cap, STD-1168, on the squib [4].

(c) Remove the lockwire from the squib [3].

1) If necessary, remove the lockwire from the squib [4].

(d) Remove the squib [3] from the discharge head.

1) If necessary, remove the squib [4] from the discharge head.

(e) Discard the O-ring [5] from the removed squib [3].

1) If the squib [4] was removed, discard the O-ring [5] from the squib [4].

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Auxiliary Power Unit (APU) Fire Extinguishing Bottle Squib Installation
Figure 401/26-22-02-990-801

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-22-02-400-801

3. APU Fire Extinguishing Bottle Squib Installation

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536
STD-1079	Resistor - 10K Ohm or Greater
STD-1168	Cap - Shorting or Faraday Cap

C. Consumable Materials

Reference	Description	Specification
D00652	Lubricant - O-Ring - Parker Super-O-Lube	
D50287	Lubricant - O-Ring, Drilube 822 (MMS-N306A)	
G02392 [P05-262]	Lockwire - MS20995C32, Corrosion Resistant Steel - 0.032 Inch (0.8121 mm) Diameter	NASM20995

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	Squib	26-22-02-01-060	LOM ALL
4	Squib	26-22-02-01-150	LOM ALL
5	O-ring	26-22-02-01-075	LOM ALL

E. Location Zones

Zone	Area
212	Flight Compartment - Right
311	Area Aft of Pressure Bulkhead - Left

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F. Access Panels

Number	Name/Location
311BL	Stabilizer Trim Access Door

G. Prepare for the Installation

SUBTASK 26-22-02-860-002

(1) Make sure that these circuit breakers are open and have safety tags:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

H. APU Fire Extinguishing Bottle Squib Installation

SUBTASK 26-22-02-420-001

(1) Do these steps to install the squib [3] in the fire extinguishing bottle:

> **WARNING** DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Before the squib [3] is touched, do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

(b) Lubricate a new O-ring [5] with O-ring lubricant, D50287, or Parker Super-O-Lube lubricant, D00652.

(c) Put the O-ring [5] on the squib [3].

(d) Install the squib [3] in the fire extinguishing bottle.

1) Tighten the squib [3] to 90 in-lb (10.2 N·m) - 100 in-lb (11.3 N·m).

2) Install MS20995C32 lockwire, G02392 [P05-262], between the squib [3] and discharge outlet.

SUBTASK 26-22-02-700-001

> **WARNING** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN FIRE SUDDENLY AND CAUSE INJURY TO PERSONNEL.

(2) Do these steps to make sure that there is no stray voltage at the electrical squib connector

Fire Bottle Squib Electrical Connector

	Engine	APU	Cargo
Connector Pins	3 and 4, and 6 and 7	3 and 4	1 and 2

(a) Connect the digital/analog multimeter, COM-1793, across the two pins.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) Make sure that the current is less than 5 milliamps AC, and less than 5 milliamps DC.

(c) Connect a resistor, STD-1079, across the multimeter probes.

(d) Make sure that the voltage is less than .250 volts AC, and less than 0.250 volts DC.

(e) If it is necessary, repeat the steps above for the other squib electrical connectors.

(f) Disconnect the multimeter.

SUBTASK 26-22-02-420-004

(3) Remove the shorting or faraday cap, STD-1168, from the squib [3].

SUBTASK 26-22-02-420-002

CAUTION MAKE SURE THAT THE SQUIB PINS CORRECTLY ENGAGE THE ELECTRICAL CONNECTOR. IF NOT, DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.

(4) Connect the electrical connector [1] to the squib [3].

SUBTASK 26-22-02-420-003

(5) If it is necessary to install the squib [4], do these steps:

WARNING DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Before the squib [4] is touched, do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

(b) Lubricate a new O-ring [5] with O-ring lubricant, D50287, or Parker Super-O-Lube lubricant, D00652.

(c) Install the O-ring [5] on the squib [4].

(d) Install the squib [4] in the fire bottle.

1) Tighten the squib [4] to 90 in-lb (10.2 N·m) - 100 in-lb (11.3 N·m).

2) Install MS20995C32 lockwire, G02392 [P05-262], between the squib [4] and discharge outlet.

3) Remove the shorting or faraday cap, STD-1168, from the squib [4].

SUBTASK 26-22-02-210-001

(6) Make sure that the protective cover [2] is installed on the squib [4].

SUBTASK 26-22-02-860-003

(7) Remove the safety tags and close these circuit breakers:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	19	C01344	APU FIRE SW POWER
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

F/O Electrical System Panel, P6-4

Row	Col	Number	Name
A	14	C00033	AUX POWER UNIT CONT

ECCN 9E991 BOEING PROPRIETARY - See title page for details

I. APU Fire Extinguishing Bottle Squib Installation Test

SUBTASK 26-22-02-740-001

(1) Set the EXT TEST switch, on the P8-1 panel, to the 1 position.

(a) Make sure that the Auxiliary Power Unit (APU) light comes on.

NOTE: The L and R lights will also come on.

SUBTASK 26-22-02-740-002

(2) Set the EXT TEST switch, on the P8-1 panel, to the 2 position.

(a) Make sure that the APU light comes on.

NOTE: The L and R lights will also come on.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 26-22-02-010-002

(1) Close this access door:

Number	Name/Location
311BL	Stabilizer Trim Access Door

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

REMOTE APU CONTROL PANEL - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the Remote APU Control Panel (P28).

(2) An installation of the Remote APU Control Panel.

B. The Remote APU Control Panel is located on the aft bulkhead of the right main wheel well.

TASK 26-22-03-000-801

2. Remote APU Control Panel Removal

(Figure 401 or Figure 402 or Figure 403)

A. General

(1) This task gives instructions to remove the Auxiliary Power Unit (APU) remote control panel.

B. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

C. Prepare for the Removal

SUBTASK 26-22-03-860-004

(1) Open this circuit breaker and install safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

D. Remote APU Control Panel Removal

SUBTASK 26-22-03-020-001

(1) Disconnect the electrical connector from the APU remote control panel [1].

SUBTASK 26-22-03-020-005

(2) Remove the bolts [5] and washers [6] that attach the APU remote control panel [1] to the nitrogen generation system operability indicator.

SUBTASK 26-22-03-020-002

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447

(3) Remove the bolts [2] and washers [3] that hold the upper and lower flange of the APU remote control panel [1].

LOM 450-464

(4) Remove the bolts [2] and washers [3] that hold the upper and lower flange of the APU remote control panel [1].

LOM 465-999

(5) Remove the bolts [2], washers [3], and bonding jumper [4] that hold the upper and lower flange of the APU remote control panel [1].

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447

SUBTASK 26-22-03-020-004

(6) If installed, remove the shims.

NOTE: Shims are located between the top bracket and the upper flange of the APU remote control panel.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU Remote Control Panel Installation
Figure 401/26-22-03-990-801 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU REMOTE CONTROL PANEL, P28

B

G24249 S0006568299_V4

APU Remote Control Panel Installation
Figure 401/26-22-03-990-801 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU Remote Control Panel Installation
Figure 402/26-22-03-990-803 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU REMOTE CONTROL PANEL, P28

B

2338244 S0000532822_V3

APU Remote Control Panel Installation
Figure 402/26-22-03-990-803 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU Remote Control Panel Installation
Figure 403/26-22-03-990-805 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU Remote Control Panel Installation
Figure 403/26-22-03-990-805 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-22-03-400-801

3. Remote APU Control Panel Installation

(Figure 401 or Figure 402 or Figure 403)

A. General

(1) This task gives instructions to install the Auxiliary Power Unit (APU) remote control panel.

B. References

Reference	Title
26-22-00-720-801	APU Fire Switch System Shutdown Test (P/B 501)
26-22-00-730-801	APU Fire Extinguishing Bottle Squib Circuit Test (P/B 501)

C. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

D. Prepare for the Installation

SUBTASK 26-22-03-860-005

(1) Make sure that this circuit breaker is open and has safety tag:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

E. Remote APU Control Panel Installation

SUBTASK 26-22-03-010-001

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447

(1) Attach the APU remote control panel [1] to the bulkhead with the bolts [2] and washers [3].

(a) If needed, install the shims to fill the gap between the top bracket and the upper flange of the APU remote control panel [1].

LOM 465-999

(2) Attach the APU remote control panel [1] to the bulkhead with the bolts [2], washers [3], and the bonding jumper [4].

LOM 450-464

(3) Attach the APU remote control panel [1] to the bulkhead with the bolts [2] and washers [3].

LOM ALL

SUBTASK 26-22-03-420-001

(4) Attach the APU remote control panel [1] to the nitrogen generation system operability indicator with the bolts [5] and washers [6].

SUBTASK 26-22-03-020-003

(5) Connect the electrical connector to the APU remote control panel [1].

SUBTASK 26-22-03-860-003

(6) Remove the safety tag and close this circuit breaker:

F/O Electrical System Panel, P6-2

Row	Col	Number	Name
B	21	C00452	FIRE PROTECTION EXTINGUISHERS APU

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F. Remote APU Control Panel Installation Test

SUBTASK 26-22-03-710-002

(1) Do this task: APU Fire Extinguishing Bottle Squib Circuit Test, TASK 26-22-00-730-801.

SUBTASK 26-22-03-710-001

(2) Do this task: APU Fire Switch System Shutdown Test, TASK 26-22-00-720-801.

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

REMOTE APU CONTROL PANEL - INSPECTION/CHECK

1. **General**
   A. This procedure contains scheduled maintenance task data.
   B. This procedure has this inspection task:
      (1) Remote APU Control Panel.

TASK 26-22-03-210-801

2. **Remote APU Control Panel**

NOTE: This procedure is a scheduled maintenance task.

A. Consumable Materials

Reference	Description	Specification
G50414	Lockwire - MS20995CY15, Copper - 0.015 Inch (0.381 mm) Diameter	NASM20995

B. Location Zones

Zone	Area
134	Main Landing Gear Wheel Well, Body Station 663.75 to Body Station 727.00 - Right

C. Procedure

SUBTASK 26-22-03-210-001

(1) Make sure the remote APU control panel is not damaged.

SUBTASK 26-22-03-210-002

(2) Make sure the remote APU control panel is securely attached.

SUBTASK 26-22-03-210-003

(3) Make sure copper MS20995CY15 lockwire, G50414, is installed on the bottle dishcarge switch on the APU remote fire panel.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU Remote Control Panel
Figure 601/26-22-03-990-802 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2136600 S0000463713_V3

APU Remote Control Panel
Figure 601/26-22-03-990-802 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

APU Remote Control Panel Installation
Figure 602/26-22-03-990-804 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2338267 S0000532823_V2

APU Remote Control Panel Installation
Figure 602/26-22-03-990-804 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO FIRE EXTINGUISHING - MAINTENANCE PRACTICES

1. General

A. This procedure contains these tasks:

(1) Cargo compartment fire extinguisher bottles and squibs - deactivation.

(2) Cargo compartment fire extinguisher bottles and squibs - activation.

TASK 26-23-00-040-801

2. Cargo Compartment Fire Extinguishers and Squibs - Deactivation

A. General

(1) This task will deactivate the 28 VDC electrical power to the Cargo Compartment Fire Extinguisher Bottle and Squib system.

B. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
212	Flight Compartment - Right

C. Procedure

SUBTASK 26-23-00-020-039

(1) Remove the 28 VDC battery electrical power from the Cargo Compartment Fire Extinguisher and Squib system.

SUBTASK 26-23-00-020-040

(2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

D. Cargo Compartment Fire Extinguishers and Squibs - Tryout

NOTE: This tryout is to make sure that the electrical power to the Cargo Compartment Fire Extinguisher Bottle and Squib system is in zero state.

SUBTASK 26-23-00-860-061

(1) On the cargo fire control panel:

(a) Push and hold the TEST switch.

1) Make sure that the green FWD and AFT EXT lights on the cargo fire control panel do not come on.

(b) Release the TEST switch.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CARGO FIRE CONTROL PANEL (P8)

A

H01949 S0006568307_V3

Cargo Fire Control Panel
Figure 201/26-23-00-990-807

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-23-00-440-801

3. **Cargo Compartment Fire Extinguishers and Squibs - Activation**
(Figure 201)

A. General

(1) This task will activate the 28 VDC electrical power to the Cargo Compartment Fire Extinguisher Bottle and Squib system.

B. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
212	Flight Compartment - Right

C. Procedure

SUBTASK 26-23-00-420-028

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO FIRE EXTINGUISHING - ADJUSTMENT/TEST

1. General

A. This procedure has these tasks:

LOM 423, 424, 439, 441, 458-460, 464-999

(1) A test of the cargo fire bottle squib circuit.

(2) A test of the cargo fire bottle pressure switch circuit.

(3) An airflow test through the discharge tubes.

(4) A pressure test of the cargo fire bottle discharge tubes.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

(5) A test of the cargo fire bottles squib circuit.

(6) A test of the cargo fire bottles pressure switch circuit.

(7) An airflow test through the discharge tubes.

(8) A pressure test of the cargo fire bottles discharge tubes.

LOM 423, 424, 439, 441, 458-460, 464-999

TASK 26-23-00-730-801

2. Cargo Fire Single Extinguishing Bottle Squib Circuit Test

(Figure 501)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner - Removal (P/B 401)
25-52-17-400-801	Forward Cargo Compartment Aft Bulkhead Liner - Installation (P/B 401)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 423, 424, 439, 441, 458-460, 464-999 (Continued)

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536
SPL-1664	Test Box - Cargo Fire Extinguishing System Part #: C26006-70 Supplier: 81205 Opt Part #: C26006-1 Supplier: 81205
STD-1079	Resistor - 10K Ohm or Greater
STD-1168	Cap - Shorting or Faraday Cap

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Cargo Fire Extinguishing Bottle Squib Circuit Test

SUBTASK 26-23-00-860-005

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-23-00-010-009

(2) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Removal, TASK 25-52-17-000-801.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 423, 424, 439, 441, 458-460, 464-999 (Continued)

SUBTASK 26-23-00-020-001

> **WARNING** DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(3) Before you touch the squib, do the procedure for devices that are sensitive to electrostatic discharge. These are the tasks:

- ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.
- ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

(4) Disconnect the electrical connectors from the squibs.

(a) Disconnect connector D12794 from the forward squib, M2249, to test the forward cargo compartment.

(b) Disconnect connector D12796 from the aft squib, M2250, to test the aft cargo compartment.

SUBTASK 26-23-00-020-002

> **WARNING** DO NOT MOVE OR TOUCH THE CARTRIDGE WITHOUT A SHORTING CAP OR FARADAY CAP INSTALLED ON THE ENDS OF THE SQUIB. THE SQUIB IS AN EXPLOSIVE DEVICE. ACCIDENTAL OPERATION OF THE SQUIB CAN CAUSE INJURY TO PERSONS.

> **CAUTION** DO NOT PUT SHUNT PLUGS ON THE FIRE BOTTLE SQUIBS. THE SHUNT PLUGS CAN CAUSE DAMAGE TO THE SQUIB PINS.

(5) Install a shorting or faraday cap, STD-1168, on the squib.

NOTE: The shorting cap may have been previously attached to the side of the fire extinguishing bottle. The shorting cap may be used to install on the squib to prevent possibly activation due to static electricity.

SUBTASK 26-23-00-480-018

(6) Connect the applicable test box, SPL-1664, connectors to the squib connectors D12794 and D12796.

SUBTASK 26-23-00-730-010

(7) Set all the switches on the test box to NO DISCHARGE.

SUBTASK 26-23-00-730-011

(8) Make sure that all the circuit breakers on the test box, SPL-1664, are closed.

SUBTASK 26-23-00-860-008

(9) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FWD DET B

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-23-00-730-012

(10) Make sure that none of the circuit breakers on the test box, SPL-1664, are open.

SUBTASK 26-23-00-730-001

WARNING MAKE SURE THE AREA OF THE AFT OUTFLOW VALVE IS CLEAR OF PERSONS AND EQUIPMENT. DURING THIS TEST THE AFT OUTFLOW VALVE DOORS CAN START TO OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(11) Do a test of the forward cargo fire bottle squib circuit.

(a) Set the EXT 1 FORWARD switch S3 on the test box, SPL-1664, to DISCHARGE.

(b) Push the FWD ARM switch on the Cargo Fire Control panel.

(c) Push and hold the DISCH switch on the Cargo Fire Control panel for approximately 15 seconds.

(d) Make sure that the EXT 1 FORWARD circuit breaker CB5 on the test box, SPL-1664, opens.

(e) Make sure that the other circuit breakers stay closed.

(f) Close the EXT 1 FORWARD circuit breaker CB5.

(g) Set the EXT 1 FORWARD switch S3 to NO DISCHARGE.

(h) Push the FWD ARM switch on the Cargo Fire Control Panel.

SUBTASK 26-23-00-730-002

WARNING MAKE SURE THE AREA OF THE AFT OUTFLOW VALVE IS CLEAR OF PERSONS AND EQUIPMENT. DURING THIS TEST THE AFT OUTFLOW VALVE DOORS CAN START TO OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(12) Do a test of the aft cargo fire bottle squib circuit.

(a) Set the EXT 1 AFT switch S4 on the test box, SPL-1664, to DISCHARGE.

(b) Push the AFT ARM switch on the Cargo Fire Control panel.

(c) Push and hold the DISCH switch on the Cargo Fire Control panel for approximately 15 seconds.

(d) Make sure that the EXT 1 AFT circuit breaker CB7 on the test box, SPL-1664, opens.

(e) Make sure that the other circuit breakers stay closed.

(f) Close the EXT 1 AFT circuit breaker CB7.

(g) Set the EXT 1 AFT switch S4 to NO DISCHARGE.

(h) Push the AFT ARM switch, on the Cargo Fire Control panel.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-00-860-010

(13) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-23-00-080-045

(14) Disconnect the test box, SPL-1664, connectors from the squib connector D12794 and connector D12796.

SUBTASK 26-23-00-700-001

WARNING MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN FIRE SUDDENLY AND CAUSE INJURY TO PERSONNEL.

(15) Do these steps to make sure that there is no stray voltage at the electrical squib connector

Fire Bottle Squib Electrical Connector

	Engine	APU	Cargo
Connector Pins	3 and 4, and 6 and 7	3 and 4	1 and 2

(a) Connect the digital/analog multimeter, COM-1793, across the two pins.

(b) Make sure that the current is less than 5 milliamps AC, and less than 5 milliamps DC.

(c) Connect a resistor, STD-1079, across the multimeter probes.

(d) Make sure that the voltage is less than .250 volts AC, and less than 0.250 volts DC.

(e) If it is necessary, repeat the steps above for the other squib electrical connectors.

(f) Disconnect the multimeter.

SUBTASK 26-23-00-020-038

(16) Remove the shorting or faraday cap, STD-1168, from the squib.

SUBTASK 26-23-00-420-001

(17) Install the connectors:

(a) Connect connector D12794 to the forward squib, M2249.

(b) Connect connector D12796 to the aft squib, M2250.

SUBTASK 26-23-00-410-005

(18) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Installation, TASK 25-52-17-400-801.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 423, 424, 439, 441, 458-460, 464-999 (Continued)

SUBTASK 26-23-00-860-031

(19) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-23-00-710-001

(20) Push and hold the TEST switch on the Cargo Fire Control panel.

(a) Make sure that the EXT FWD and AFT lights come on.

SUBTASK 26-23-00-710-002

(21) Release the TEST switch.

(a) Make sure that the EXT FWD and AFT lights go off.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CARGO FIRE CONTROL PANEL (P8)

A

H01949 S0006568307_V3

Cargo Bay Fire Extinguishing Test
Figure 501/26-23-00-990-801 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

H02267 S0006568309_V3

Cargo Bay Fire Extinguishing Test
Figure 501/26-23-00-990-801 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-23-00-730-802

3. **Cargo Fire Single Extinguishing Bottle Pressure Switch Circuit Test**
(Figure 501)

A. **General**

(1) The pressure switch test should be performed every time the Cargo Fire Control Panel, or a pressure switch is disconnected from the airplane wiring.

B. **References**

Reference	Title
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner - Removal (P/B 401)
25-52-17-400-801	Forward Cargo Compartment Aft Bulkhead Liner - Installation (P/B 401)

C. **Location Zones**

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. **Prepare for the Test**

SUBTASK 26-23-00-010-015

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Removal, TASK 25-52-17-000-801.

E. **Cargo Fire Single Extinguishing Bottle Pressure Switch Test**

LOM 423, 424, 439, 441, 458-460, 464-999 WITH MANUAL OVERRIDE ON THE PRESSURE SWITCH

SUBTASK 26-23-00-710-007

(1) Do a test of the fire extinguisher pressure switch.
   (a) Push and hold the pressure switch manual-override button on the fire extinguisher bottle.
   (b) Make sure the yellow DISCH light on the Cargo Fire Control Panel, P8, comes on.
   (c) Release the pressure switch manual-override button on the fire extinguisher bottle.
   (d) Make sure the DISCH light on the Cargo Fire Control Panel, P8, goes off.

LOM 423, 424, 439, 441, 458-460, 464-999 WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH

SUBTASK 26-23-00-020-003

(2) Do a test of the fire extinguisher pressure switch.
   (a) Disconnect connector D12792 from the pressure switch on cargo fire bottle 1.
   (b) Do a test of the cargo fire bottle pressure switch circuit.
      1) Connect a jumper wire between pins 2 and 3 on D12792.
      2) Make sure the DISCH light on the Cargo Fire Control Panel comes on.
      3) Remove the jumper from D12792.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(c) Connect D12792 to the pressure switch on cargo fire bottle 1.

LOM 423, 424, 439, 441, 458-460, 464-999

F. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-00-410-011

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Installation, TASK 25-52-17-400-801.

——— END OF TASK ———

TASK 26-23-00-720-801

4. Cargo Fire Single Extinguishing Discharge Line Flow Test

(Figure 501)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) The cargo fire extinguishing discharge line flow test makes sure there is nothing blocking the discharge lines.

B. References

Reference	Title
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner - Removal (P/B 401)
25-52-17-400-801	Forward Cargo Compartment Aft Bulkhead Liner - Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1115	Source - Nitrogen, 0-100 PSIG

D. Consumable Materials

Reference	Description	Specification
D50004	Compound - Antiseize	BMS3-28
G50136	Compound - Corrosion Inhibiting, Non-drying Paste	BMS3-38
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

F. Prepare for the Test

SUBTASK 26-23-00-010-013

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Removal, TASK 25-52-17-000-801.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G. Cargo Fire Single Extinguishing Discharge Line Flow Test

SUBTASK 26-23-00-030-002

> **CAUTION**
> USE TWO WRENCHES TO LOOSEN OR TIGHTEN THE FITTING. IF YOU TWIST THE TUBE OR FITTING, YOU CAN CAUSE DAMAGE TO THEM.

(1) Remove the discharge tubes from the discharge outlets on cargo fire bottle 1.

SUBTASK 26-23-00-480-001

(2) Connect a 0-100 PSIG nitrogen source, STD-1115 to the forward (yellow) cargo bottle discharge line at bottle 1.

NOTE: Alternate pressure sources can be used. The pressure source must have an accuracy of 1 PSIG and be capable of applying a pressure of 35 to 50 PSIG.

(a) Make sure air is flowing through all open nozzles in the forward cargo compartment.

SUBTASK 26-23-00-080-032

(3) Remove the pressure source from the discharge line.

SUBTASK 26-23-00-480-002

(4) Connect a 0-100 PSIG nitrogen source, STD-1115 to the aft (blue) cargo bottle discharge line at bottle 1.

NOTE: Alternate pressure sources can be used. The pressure source must have an accuracy of 1 PSIG and be capable of applying a pressure of 35 to 50 PSIG.

(a) Make sure air is flowing through all open nozzles in the aft cargo compartment.

SUBTASK 26-23-00-080-003

(5) Remove the pressure source from the discharge line.

SUBTASK 26-23-00-420-043

(6) Connect the discharge tubes to the discharge outlets on bottle 1.

> **WARNING**
> DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(a) Apply a layer of compound, D50004 to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) Permitted alternative anti-corrosion compounds to use in this location are Cor-Ban 27L Compound, G50237 or corrosion inhibiting material, G50136.

(b) Connect the tube assemblies to the discharge heads.

NOTE: The tube assemblies that are marked in yellow supply the extinguishing agent to the forward cargo compartment and the ones marked in blue supply the aft cargo compartment.

(c) Remove any unwanted compound.

(d) Tighten the nuts on the tube assemblies to these torque values:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Discharge Tube Torque Values

Nut Size	Tube Outer Diameter	Torque (MIN)	Torque (MAX)
7/8 in	1/2 in	266 in-lb (30 N·m)	294 in-lb (33 N·m)
1 in	5/8 in	342 in-lb (39 N·m)	378 in-lb (43 N·m)

H. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-00-410-009

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Installation, TASK 25-52-17-400-801.

END OF TASK

TASK 26-23-00-730-803

5. Cargo Fire Single Extinguishing Discharge Line Pressure Test

(Figure 501)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) The pressure test is the same for all cargo compartments.

B. References

Reference	Title
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner - Removal (P/B 401)
25-52-17-400-801	Forward Cargo Compartment Aft Bulkhead Liner - Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1648	Discharge Lines - Cargo Fire Extinguisher Nozzle Caps Part #: B26002-1 Supplier: 81205
STD-1115	Source - Nitrogen, 0-100 PSIG

D. Consumable Materials

Reference	Description	Specification
D50004	Compound - Antiseize	BMS3-28
G50136	Compound - Corrosion Inhibiting, Non-drying Paste	BMS3-38
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Zone	Area
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

F. Prepare for the Test

SUBTASK 26-23-00-010-016

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Removal, TASK 25-52-17-000-801.

G. Cargo Fire Extinguishing Discharge Line Pressure Test

SUBTASK 26-23-00-020-005

> **CAUTION** USE TWO WRENCHES TO LOOSEN OR TIGHTEN THE FITTING. IF YOU TWIST THE TUBE OR FITTING, YOU CAN CAUSE DAMAGE TO THEM.

(1) Remove the discharge tubes from the discharge outlets on cargo fire bottle 1.

SUBTASK 26-23-00-480-003

(2) Connect a 0-100 PSIG nitrogen source, STD-1115, to the forward (yellow) cargo bottle 1 discharge line.

NOTE: Alternate pressure sources can be used. The pressure source must have an accuracy of 1 PSIG and be capable of applying a pressure of up to 55 PSIG.

SUBTASK 26-23-00-480-004

(3) Install the nozzle caps, SPL-1648, on the fire extinguishing nozzles in the forward cargo compartment.

SUBTASK 26-23-00-780-001

(4) Pressurize the fire extinguishing plumbing to 50 psig (345 kPa) to 55 psig (379 kPa).

(a) Wait at least 3 minutes for the air pressure to stabilize.

SUBTASK 26-23-00-780-002

(5) Turn off the pressure source.

(a) Record the stabilized air pressure.

(b) Wait 10 minutes, then check the pressure.

1) Make sure the pressure loss during the 10 minute waiting period is not more than 5.0 psi (34.5 kPa).

SUBTASK 26-23-00-780-003

(6) Bleed the fire extinguishing plumbing to 0 psi and disconnect the pressure source.

SUBTASK 26-23-00-080-004

(7) Remove the nozzle caps, SPL-1648, from the discharge nozzles in the forward cargo compartment.

SUBTASK 26-23-00-480-005

(8) Connect a 0-100 PSIG nitrogen source, STD-1115, to the aft (blue) cargo bottle 1 discharge line.

NOTE: Alternate pressure sources can be used. The pressure source must have an accuracy of 1 PSIG and be capable of applying a pressure of up to 55 PSIG.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 423, 424, 439, 441, 458-460, 464-999 (Continued)

SUBTASK 26-23-00-480-006

(9) Install the nozzle caps, SPL-1648, on the fire extinguishing nozzles in the aft cargo compartment.

SUBTASK 26-23-00-780-004

(10) Pressurize the fire extinguishing plumbing to 50 psig (345 kPa) to 55 psig (379 kPa).

(a) Wait at least 3 minutes for the air pressure to stabilize.

SUBTASK 26-23-00-780-005

(11) Turn off the pressure source.

(a) Record the stabilized air pressure.

(b) Wait 10 minutes, then check the pressure.

1) Make sure the pressure loss during the 10 minute waiting period is not more than 5.0 psi (34.5 kPa).

SUBTASK 26-23-00-780-006

(12) Bleed the fire extinguishing plumbing to 0 psi and disconnect the pressure source.

SUBTASK 26-23-00-080-005

(13) Remove the nozzle caps, SPL-1648, from the discharge nozzles in the aft cargo compartment.

SUBTASK 26-23-00-420-004

(14) Connect the discharge tubes to the discharge outlets on bottle 1.

WARNING

DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(a) Apply a layer of compound, D50004, (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) Permitted alternative anti-corrosion compounds for use in this location are Cor-Ban 27L Compound, G50237, or corrosion inhibiting material, G50136.

(b) Connect the tube assemblies to the discharge heads.

NOTE: The tube assemblies that are marked in yellow supply the extinguishing agent to the forward cargo compartment and the ones marked in blue supply the aft cargo compartment.

(c) Remove any unwanted compound.

(d) Tighten the nuts on the tube assemblies to these torque values:

Discharge Tube Torque Values

Nut Size	Tube Outer Diameter	Torque (MIN)	Torque (MAX)
7/8 in	1/2 in	266 in-lb (30 N·m)	294 in-lb (33 N·m)
1 in	5/8 in	342 in-lb (39 N·m)	378 in-lb (43 N·m)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 423, 424, 439, 441, 458-460, 464-999 (Continued)

H. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-00-410-012

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Installation, TASK 25-52-17-400-801.

END OF TASK

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

TASK 26-23-00-730-809

6. Cargo Fire Dual Extinguishing Bottle Squib Circuit Test

(Figure 502)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner - Removal (P/B 401)
25-52-17-400-801	Forward Cargo Compartment Aft Bulkhead Liner - Installation (P/B 401)
32-09-00-860-801	Put the Airplane in the Air Mode (P/B 201)
32-09-00-860-802	Return the Airplane to the Ground Mode (P/B 201)

B. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Reference	Description
SPL-1664	Test Box - Cargo Fire Extinguishing System Part #: C26006-70 Supplier: 81205 Opt Part #: C26006-1 Supplier: 81205
STD-1079	Resistor - 10K Ohm or Greater
STD-1168	Cap - Shorting or Faraday Cap

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Cargo Fire Dual Extinguishing Bottle Squib Circuit Test

SUBTASK 26-23-00-860-062

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-23-00-010-010

(2) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Removal, TASK 25-52-17-000-801.

SUBTASK 26-23-00-860-064

(3) Do this task: Put the Airplane in the Air Mode, TASK 32-09-00-860-801.

SUBTASK 26-23-00-020-041

WARNING DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(4) Before you touch the squib, do the procedure for devices that are sensitive to electrostatic discharge. These are the tasks:

- ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.
- ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

(5) Disconnect the electrical connectors from the squibs.

(a) Disconnect D12794 from bottle 1 to test the forward cargo compartment.

(b) Disconnect D12818 from bottle 2 to test the forward cargo compartment.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(c) Disconnect D12796 from bottle 1 to test the aft cargo compartment.

(d) Disconnect D12820 from bottle 2 to test the aft cargo compartment.

SUBTASK 26-23-00-020-042

WARNING DO NOT MOVE OR TOUCH THE CARTRIDGE WITHOUT A SHORTING CAP OR FARADAY CAP INSTALLED ON THE ENDS OF THE SQUIB. THE SQUIB IS AN EXPLOSIVE DEVICE. ACCIDENTAL OPERATION OF THE SQUIB CAN CAUSE INJURY TO PERSONS.

CAUTION DO NOT PUT SHUNT PLUGS ON THE FIRE BOTTLE SQUIBS. THE SHUNT PLUGS CAN CAUSE DAMAGE TO THE SQUIB PINS.

(6) Install a shorting or faraday cap, STD-1168, on the squib.

NOTE: The shorting cap may have been previously attached to the side of the fire extinguishing bottle. The shorting cap may be used to install on the squib to prevent possibly activation due to static electricity.

SUBTASK 26-23-00-480-036

(7) Connect the squib connectors to the applicable connectors on test box, SPL-1664.

SUBTASK 26-23-00-730-029

(8) Set all the switches on the test box to NO DISCHARGE.

SUBTASK 26-23-00-730-030

(9) Make sure that all the circuit breakers on the test box are closed.

SUBTASK 26-23-00-860-065

(10) Close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-23-00-730-031

(11) Make sure that none of the circuit breakers on the test box open.

SUBTASK 26-23-00-730-032

WARNING MAKE SURE THE AREA OF THE AFT OUTFLOW VALVE IS CLEAR OF PERSONS AND EQUIPMENT. DURING THIS TEST THE AFT OUTFLOW VALVE DOORS CAN START TO OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(12) Do a test of the forward cargo fire bottle squib circuit.

(a) Set the EXT 1 FWD switch on the test box to DISCHARGE.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(b) Push the FWD ARMED switch on the Cargo Fire Control panel.

(c) Push and hold the DISCH switch on the Cargo Fire Control panel for approximately 3 seconds.

(d) Make sure that the EXT 1 FWD circuit breaker opens.

(e) Make sure that the other circuit breakers stay closed.

(f) Close the EXT 1 FORWARD circuit breaker.

(g) Set the EXT 1 FORWARD switch to NO DISCHARGE.

(h) Set the EXT 2 FORWARD switch S1 on the test box to DISCHARGE.

(i) Wait 60 ± 6 minutes, then make sure that the EXT 2 FORWARD circuit breaker opens.

(j) Make sure that the other circuit breakers stay closed.

(k) Close the EXT 2 FORWARD circuit breaker.

(l) Set the EXT 2 FORWARD switch S1 to NO DISCHARGE.

(m) Push the FWD ARM switch, on the Cargo Fire Control Panel, to the usual position.

SUBTASK 26-23-00-730-033

WARNING MAKE SURE THE AREA OF THE AFT OUTFLOW VALVE IS CLEAR OF PERSONS AND EQUIPMENT. DURING THIS TEST THE AFT OUTFLOW VALVE DOORS CAN START TO OPERATE. THIS CAN CAUSE INJURIES TO PERSONS AND DAMAGE TO EQUIPMENT.

(13) Do a test of the aft cargo fire bottle squib circuit.

(a) Set the EXT 1 AFT switch on the test box to DISCHARGE.

(b) Push the AFT ARMED switch on the Cargo Fire Control panel.

(c) Push and hold the DISCH switch on the Cargo Fire Control panel for approximately 3 seconds.

(d) Make sure that the EXT 1 AFT circuit breaker opens.

(e) Make sure that the other circuit breakers stay closed.

(f) Close the EXT 1 AFT circuit breaker.

(g) Set the EXT 1 AFT switch to NO DISCHARGE.

(h) Set the EXT 2 AFT switch S2 on the test box to DISCHARGE.

(i) Wait 60 ± 6 minutes, then make sure that the EXT 2 AFT circuit breaker opens.

(j) Make sure that the other circuit breakers stay closed.

(k) Close the EXT 2 AFT circuit breaker.

(l) Set the EXT 2 AFT switch S2 to NO DISCHARGE.

(m) Push the AFT ARM switch, on the Cargo Fire Control panel, to the usual position.

SUBTASK 26-23-00-860-066

(14) Do this task: Return the Airplane to the Ground Mode, TASK 32-09-00-860-802.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-00-860-067

(15) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-23-00-080-046

(16) Disconnect the squib connectors from the test box, SPL-1664.

SUBTASK 26-23-00-700-003

WARNING MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN FIRE SUDDENLY AND CAUSE INJURY TO PERSONNEL.

(17) Do these steps to make sure that there is no stray voltage at the electrical squib connector

Fire Bottle Squib Electrical Connector

	Engine	APU	Cargo
Connector Pins	3 and 4, and 6 and 7	3 and 4	1 and 2

(a) Connect the digital/analog multimeter, COM-1793, across the two pins.

(b) Make sure that the current is less than 5 milliamps AC, and less than 5 milliamps DC.

(c) Connect a resistor, STD-1079, across the multimeter probes.

(d) Make sure that the voltage is less than .250 volts AC, and less than 0.250 volts DC.

(e) If it is necessary, repeat the steps above for the other squib electrical connectors.

(f) Disconnect the multimeter.

SUBTASK 26-23-00-020-043

(18) Remove the shorting or faraday cap, STD-1168, from the squib.

SUBTASK 26-23-00-420-029

(19) Install the connectors:

(a) Connect D12794 to the forward squib, M2249 on bottle 1.

(b) Connect D12796 to the aft squib, M2250 on bottle 1.

(c) Connect D12818 to the forward squib, M2264 on bottle 2.

(d) Connect D12820 to the aft squib, M2265 on bottle 2.

SUBTASK 26-23-00-410-006

(20) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Installation, TASK 25-52-17-400-801.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463 (Continued)

SUBTASK 26-23-00-860-068

(21) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2
B	17	C01526	CARGO FIRE EXT 1
C	16	C01523	CARGO FIRE FWD DET B
C	17	C01522	CARGO FIRE FWD DET A
C	18	C01525	CARGO FIRE AFT DET B
C	19	C01524	CARGO FIRE AFT DET A

SUBTASK 26-23-00-710-011

(22) Push and hold the TEST switch on the Cargo Fire Control panel.

(a) Make sure that the EXT FWD and AFT lights come on.

SUBTASK 26-23-00-710-012

(23) Release the TEST switch.

(a) Make sure that the EXT FWD and AFT lights go off.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FLIGHT COMPARTMENT

CARGO FIRE CONTROL PANEL (P8)

A

H01949 S0006568307_V3

Cargo Bay Fire Extinguishing Test
Figure 502/26-23-00-990-808 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

M97756 S0006568311_V2

Cargo Bay Fire Extinguishing Test
Figure 502/26-23-00-990-808 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463 (Continued)

TASK 26-23-00-730-810

7. Cargo Fire Dual Extinguishing Bottle Pressure Switch Circuit Test

(Figure 502)

A. General

(1) The pressure switch test should be performed every time the cargo fire control panel, or a pressure switch is disconnect from the airplane wiring.

B. References

Reference	Title
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner - Removal (P/B 401)
25-52-17-400-801	Forward Cargo Compartment Aft Bulkhead Liner - Installation (P/B 401)

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
211	Flight Compartment - Left
212	Flight Compartment - Right

D. Prepare for the Test

SUBTASK 26-23-00-010-017

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Removal, TASK 25-52-17-000-801.

SUBTASK 26-23-00-860-076

(2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2
B	17	C01526	CARGO FIRE EXT 1

E. Cargo Fire Dual Extinguishing Bottle Pressure Switch Test

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-431, 433, 434, 437, 438, 440, 442-447, 450-457, 461-463 WITH MANUAL OVERRIDE ON THE PRESSURE SWITCH

SUBTASK 26-23-00-710-013

(1) Do a test of the fire extinguisher pressure switch.

(a) Push and hold the pressure switch manual-override button on the fire extinguisher bottle.

(b) Make sure that the yellow DISCH light, on the P8 cargo fire control panel, comes on.

(c) Release the pressure switch manual-override button on the fire extinguisher bottle.

(d) Make sure that the DISCH light, on the P8 cargo fire control panel, goes off.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 432; AIRPLANES WITH FIRE BOTTLES WITH MANUAL OVERRIDE ON THE PRESSURE SWITCH

SUBTASK 26-23-00-710-014

(2) Do a test of the fire extinguisher pressure switch.

(a) Push and hold the pressure switch manual-override button on the fire extinguisher bottle.

(b) Make sure that the yellow DISCH light, on the P8 cargo fire control panel, comes on.

(c) Release the pressure switch manual-override button on the fire extinguisher bottle.

(d) Make sure that the DISCH light, on the P8 cargo fire control panel, goes off.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-431, 433, 434, 437, 438, 440, 442-447, 450-457, 461-463 WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH

SUBTASK 26-23-00-020-044

(3) Do a test of the fire extinguisher pressure switch.

(a) Disconnect connector D12792 from the pressure switch on cargo fire bottle 1.

(b) Disconnect connector D12816 from the pressure switch on cargo fire bottle 2.

(c) Do a test of the cargo fire bottle pressure switch circuit.

1) Connect a jumper wire between pins 2 and 3 on D12792.

2) Make sure that the DISCH light, on the P8 cargo fire control panel, comes on.

3) Remove the jumper from D12792.

4) Connect a jumper wire between pins 2 and 3 on D12816.

5) Make sure that the DISCH light, on the P8 cargo fire control panel, comes on.

6) Remove the jumper from D12816.

(d) Connect D12792 to the pressure switch on cargo fire bottle 1.

(e) Connect D12816 to the pressure switch on cargo fire bottle 2.

LOM 432; AIRPLANES WITH FIRE BOTTLES WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH

SUBTASK 26-23-00-710-015

(4) Do a test of the fire extinguisher pressure switch.

(a) Disconnect connector D12792 from the pressure switch on cargo fire bottle 1.

(b) Disconnect connector D12816 from the pressure switch on cargo fire bottle 2.

(c) Do a test of the cargo fire bottle pressure switch circuit.

1) Connect a jumper wire between pins 2 and 3 on D12792.

2) Make sure that the DISCH light, on the P8 cargo fire control panel, comes on.

3) Remove the jumper from D12792.

4) Connect a jumper wire between pins 2 and 3 on D12816.

5) Make sure that the DISCH light, on the P8 cargo fire control panel, comes on.

6) Remove the jumper from D12816.

(d) Connect D12792 to the pressure switch on cargo fire bottle 1.

(e) Connect D12816 to the pressure switch on cargo fire bottle 2.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-00-410-013

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Installation, TASK 25-52-17-400-801.

SUBTASK 26-23-00-860-077

(2) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
B	16	C01528	CARGO FIRE EXT 2
B	17	C01526	CARGO FIRE EXT 1

END OF TASK

TASK 26-23-00-720-803

8. Cargo Fire Dual Extinguishing Discharge Line Flow Test

(Figure 502)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) The cargo fire extinguishing discharge line flow test makes sure there is nothing blocking the discharge lines.

(2) There are two bottles on the airplane. The contents of bottle 1 is released when the discharge switch is pushed. Bottle 2 is discharged 60 minutes later through a flow filter/dryer. In this test, the discharge lines will be removed from bottle 1, and from the output of the filter/dryers. The flow will be checked from the output of bottle 1 through the discharge nozzles and the filter/dryer output line.

B. References

Reference	Title
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner - Removal (P/B 401)
25-52-17-400-801	Forward Cargo Compartment Aft Bulkhead Liner - Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1115	Source - Nitrogen, 0-100 PSIG

D. Consumable Materials

Reference	Description	Specification
D50004	Compound - Antiseize	BMS3-28
G50136	Compound - Corrosion Inhibiting, Non-drying Paste	BMS3-38
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38

ECCN 9E991 BOEING PROPRIETARY - See title page for details

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

F. Prepare for the Test

SUBTASK 26-23-00-010-014

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Removal, TASK 25-52-17-000-801.

G. Cargo Fire Dual Extinguishing Discharge Line Flow Test

SUBTASK 26-23-00-020-045

> **CAUTION**
> USE TWO WRENCHES TO LOOSEN OR TIGHTEN THE FITTING. IF YOU TWIST THE TUBE OR FITTING, YOU CAN CAUSE DAMAGE TO THEM.

(1) Remove the discharge tubes from the discharge outlets on cargo fire bottle 1.

SUBTASK 26-23-00-020-046

(2) Remove the discharge tubes from the outputs of the two pressure filter/dryers connected to bottle 2.

SUBTASK 26-23-00-480-037

> **CAUTION**
> DO NOT APPLY AIR PRESSURE TO THE OUTPUT OF THE PRESSURE FILTER/DRIER. AIR PRESSURE CAN CAUSE DAMAGE TO THE FILTER/DRIER.

(3) Connect a 0-100 PSIG nitrogen source, STD-1115 to the forward (yellow) cargo bottle discharge line at bottle 1.

NOTE: Alternate pressure sources can be used. The pressure source must have an accuracy of 1 PSIG and be capable of applying a pressure of 35 to 50 PSIG.

(a) Make sure air is flowing through all open nozzles in the forward cargo compartment.

(b) Make sure air is flowing through the output line that was removed from the forward filter/dryer of bottle 2.

SUBTASK 26-23-00-080-037

(4) Remove the pressure source from the discharge line.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463 (Continued)

SUBTASK 26-23-00-480-038

> **CAUTION** DO NOT APPLY AIR PRESSURE TO THE OUTPUT OF THE PRESSURE FILTER/DRIER. AIR PRESSURE CAN CAUSE DAMAGE TO THE FILTER/DRIER.

(5) Connect a 0-100 PSIG nitrogen source, STD-1115 to the aft (blue) cargo bottle discharge line at bottle 1.

NOTE: Alternate pressure sources can be used. The pressure source must have an accuracy of 1 PSIG and be capable of applying a pressure of 35 to 50 PSIG.

(a) Make sure air is flowing through all open nozzles in the aft cargo compartment.

(b) Make sure air is flowing through the output line that was removed from the aft filter/dryer connected to fire bottle 2.

SUBTASK 26-23-00-080-038

(6) Remove the pressure source from the discharge line.

SUBTASK 26-23-00-420-030

(7) Connect the discharge tubes to the discharge outlets on bottle 1.

> **WARNING** DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(a) Apply a layer of compound, D50004 to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) Permitted alternative anti-corrosion compounds to use in this location are Cor-Ban 27L Compound, G50237 or corrosion inhibiting material, G50136.

(b) Connect the tube assemblies to the discharge heads.

NOTE: The tube assemblies that are marked in yellow supply the extinguishing agent to the forward cargo compartment and the ones marked in blue supply the aft cargo compartment.

(c) Remove any unwanted compound.

(d) Tighten the nuts on the tube assemblies to these torque values:

Discharge Tube Torque Values

Nut Size	Tube Outer Diameter	Torque (MIN)	Torque (MAX)
7/8 in	1/2 in	266 in-lb (30 N·m)	294 in-lb (33 N·m)
1 in	5/8 in	342 in-lb (39 N·m)	378 in-lb (43 N·m)

SUBTASK 26-23-00-420-031

(8) Connect the discharge tubes to the discharge outlets on the filter/dryers connected to fire bottle 2.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WARNING DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(a) Apply a layer of compound, D50004 to the outlet threads, outlet end, and outlet inner diameter where the tube assemblies attach to the filter/dryers.

1) Permitted alternative anti-corrosion compounds to use in this location are Cor-Ban 27L Compound, G50237 or corrosion inhibiting material, G50136.

(b) Connect the tube assemblies to the filter/dryers.

NOTE: The tube assemblies that are marked in yellow supply the extinguishing agent to the forward cargo compartment and the ones marked in blue supply the aft cargo compartment.

(c) Remove any unwanted compound.

(d) Tighten the nuts on the tube assemblies to these torque values:

Discharge Tube Torque Values

Nut Size	Tube Outer Diameter	Torque (MIN)	Torque (MAX)
7/8 in	1/2 in	266 in-lb (30 N·m)	294 in-lb (33 N·m)
1 in	5/8 in	342 in-lb (39 N·m)	378 in-lb (43 N·m)

H. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-00-410-010

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Installation, TASK 25-52-17-400-801.

END OF TASK

TASK 26-23-00-730-811

9. Cargo Fire Dual Extinguishing Discharge Line Pressure Test

(Figure 502)

NOTE: This procedure is a scheduled maintenance task.

A. General

CAUTION USE TWO WRENCHES TO LOOSEN OR TIGHTEN THE FITTING. IF YOU TWIST THE TUBE OR FITTING, YOU CAN CAUSE DAMAGE TO THEM.

(1) The pressure test is the same for all cargo compartments.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

B. References

Reference	Title
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner - Removal (P/B 401)
25-52-17-400-801	Forward Cargo Compartment Aft Bulkhead Liner - Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
SPL-1648	Discharge Lines - Cargo Fire Extinguisher Nozzle Caps Part #: B26002-1 Supplier: 81205
STD-1115	Source - Nitrogen, 0-100 PSIG

D. Consumable Materials

Reference	Description	Specification
D50004	Compound - Antiseize	BMS3-28
G50136	Compound - Corrosion Inhibiting, Non-drying Paste	BMS3-38
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38

E. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

F. Prepare for the Test

SUBTASK 26-23-00-010-018

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Removal, TASK 25-52-17-000-801.

G. Cargo Fire Dual Extinguishing Discharge Line Pressure Test

SUBTASK 26-23-00-020-049

(1) Remove the discharge tubes from the discharge outlets on cargo fire bottle 1.

SUBTASK 26-23-00-020-050

(2) Remove the discharge tubes from the filter/dryer outputs on cargo fire bottle 2.

(a) Plug the discharge tubes.

SUBTASK 26-23-00-480-042

(3) Connect a 0-100 PSIG nitrogen source, STD-1115, to the forward (yellow) cargo bottle 1 discharge line.

NOTE: Alternate pressure sources can be used. The pressure source must have an accuracy of 1 PSIG and be capable of applying a pressure of up to 55 PSIG.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-00-480-043

(4) Install the nozzle cap, SPL-1648, on the fire extinguishing nozzles in the forward cargo compartment.

SUBTASK 26-23-00-780-021

(5) Pressurize the fire extinguishing plumbing to 50 psig (345 kPa) to 55 psig (379 kPa).

(a) Wait at least 3 minutes for the air pressure to stabilize.

SUBTASK 26-23-00-780-022

(6) Turn off the pressure source.

(a) Record the stabilized air pressure.

(b) Wait 10 minutes, then check the pressure.

1) Make sure the pressure loss during the 10 minute waiting period is not more than 5 psi (34.5 kPa).

SUBTASK 26-23-00-780-023

(7) Bleed the fire extinguishing plumbing to 0 psi and disconnect the pressure source.

SUBTASK 26-23-00-080-040

(8) Remove the nozzle cap, SPL-1648, from the discharge nozzles in the forward cargo compartment.

SUBTASK 26-23-00-480-044

(9) Connect a 0-100 PSIG nitrogen source, STD-1115, to the aft (blue) cargo bottle 1 discharge line.

NOTE: Alternate pressure sources can be used. The pressure source must have an accuracy of 1 PSIG and be capable of applying a pressure of up to 55 PSIG.

SUBTASK 26-23-00-480-045

(10) Install the nozzle cap, SPL-1648, on the fire extinguishing nozzles in the aft cargo compartment.

SUBTASK 26-23-00-780-024

(11) Pressurize the fire extinguishing plumbing to 50 psig (345 kPa) to 55 psig (379 kPa).

(a) Wait at least 3 minutes for the air pressure to stabilize.

SUBTASK 26-23-00-780-025

(12) Turn off the pressure source.

(a) Record the stabilized air pressure.

(b) Wait 10 minutes, then check the pressure.

1) Make sure the pressure loss during the 10 minute waiting period is not more than 5 psi (34.5 kPa).

SUBTASK 26-23-00-780-026

(13) Bleed the fire extinguishing plumbing to 0 psi and disconnect the pressure source.

SUBTASK 26-23-00-080-041

(14) Remove the nozzle cap, SPL-1648, from the discharge nozzles in the aft cargo compartment.

SUBTASK 26-23-00-080-043

(15) Remove the plugs from the filter/dryer output lines on cargo fire bottle 2.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-00-420-034

(16) Connect the discharge tubes to the discharge outlets on bottle 1.

> **WARNING**
> DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(a) Apply a layer of compound, D50004, (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) Permitted alternative anti-corrosion compounds for use in this location are Cor-Ban 27L Compound, G50237, or corrosion inhibiting material, G50136.

(b) Connect the tube assemblies to the discharge heads.

NOTE: The tube assemblies that are marked in yellow supply the extinguishing agent to the forward cargo compartment and the ones marked in blue supply the aft cargo compartment.

(c) Remove any unwanted compound.

(d) Tighten the nuts on the tube assemblies to these torque values:

Discharge Tube Torque Values

Nut Size	Tube Outer Diameter	Torque (MIN)	Torque (MAX)
7/8 in	1/2 in	266 in-lb (30 N·m)	294 in-lb (33 N·m)
1 in	5/8 in	342 in-lb (39 N·m)	378 in-lb (43 N·m)

SUBTASK 26-23-00-420-035

(17) Connect the discharge tubes to the filter/dryer outputs on cargo fire bottle 2.

> **WARNING**
> DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(a) Apply a layer of compound, D50004, (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

1) Permitted alternative anti-corrosion compounds for use in this location are Cor-Ban 27L Compound, G50237, or corrosion inhibiting material, G50136.

(b) Connect the tube assemblies to the discharge heads.

NOTE: The tube assemblies that are marked in yellow supply the extinguishing agent to the forward cargo compartment and the ones marked in blue supply the aft cargo compartment.

(c) Remove any unwanted compound.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(d) Tighten the nuts on the tube assemblies to these torque values:

Discharge Tube Torque Values

Nut Size	Tube Outer Diameter	Torque (MIN)	Torque (MAX)
7/8 in	1/2 in	266 in-lb (30 N·m)	294 in-lb (33 N·m)
1 in	5/8 in	342 in-lb (39 N·m)	378 in-lb (43 N·m)

H. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-00-410-014

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Installation, TASK 25-52-17-400-801.

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE - REMOVAL/INSTALLATION

1. General

A. This procedure contains the following tasks:

(1) A removal of the cargo fire extinguishing bottle

(2) An installation of the cargo fire extinguishing bottle.

B. A cargo fire extinguisher bottle is installed in the mix manifold bay, in the aft end of the lower fwd cargo compartment.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

C. A second cargo fire extinguisher bottle is also installed in the mix manifold bay.

LOM ALL

TASK 26-23-01-000-801-001

2. Cargo Fire Extinguisher Bottle Removal

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives instructions to remove the cargo fire extinguisher bottle.

B. References

Reference	Title
20-40-12-000-802	ESDS Handling for Metal Encased Unit Removal (P/B 201)
26-23-04-000-801	Cargo Fire Extinguishing Filter/Drier Removal (P/B 401)
26-23-04-400-801	Cargo Fire Extinguishing Filter/Drier Installation (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1168	Cap - Shorting or Faraday Cap

D. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

E. Access Panels

Number	Name/Location
821	Forward Cargo Door

F. Prepare for the Removal

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

SUBTASK 26-23-01-960-006

(1) When either of the extinguisher bottles are discharged, the filter/dryer must also be replaced, do these tasks:

- Cargo Fire Extinguishing Filter/Drier Removal, TASK 26-23-04-000-801
- Cargo Fire Extinguishing Filter/Drier Installation, TASK 26-23-04-400-801.

LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-01-860-071

(2) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-23-01-010-033

(3) Open this access panel:

Number	Name/Location
821	Forward Cargo Door

SUBTASK 26-23-01-020-053

(4) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-23-01-860-072

(5) If it is necessary, remove the air conditioning duct that is in front of the fire extinguishing bottle.

G. Cargo Fire Extinguisher Bottle Removal

SUBTASK 26-23-01-020-046

(1) Disconnect the electrical connectors from the cargo fire extinguisher bottle [1].

WARNING DO NOT TOUCH THE PINS ON THE SQUIBS. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT

(a) Before the squib is touched, do this task: ESDS Handling for Metal Encased Unit Removal, TASK 20-40-12-000-802.

(b) Disconnect the pressure switch connector, D12792 from cargo fire extinguisher bottle [1].

(c) Disconnect the FWD squib (M2249) connector, D12794 from cargo fire extinguisher bottle [1].

(d) Disconnect the AFT squib (M2250) connector, D12796 from cargo fire extinguisher bottle [1].

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

(e) Disconnect the pressure switch connector, D12816 from No. 2 cargo fire extinguisher bottle [1].

(f) Disconnect the FWD squib (M2264) connector, D12818 from No. 2 cargo fire extinguisher bottle [1].

(g) Disconnect the AFT squib (M2265) connector, D12820 from No. 2 cargo fire extinguisher bottle [1].

LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-01-020-047

WARNING DO NOT MOVE OR TOUCH THE CARTRIDGE WITHOUT A SHORTING CAP OR FARADAY CAP INSTALLED ON THE ENDS OF THE SQUIB. THE SQUIB IS AN EXPLOSIVE DEVICE. ACCIDENTAL OPERATION OF THE SQUIB CAN CAUSE INJURY TO PERSONS.

CAUTION DO NOT PUT SHUNT PLUGS ON THE FIRE BOTTLE SQUIBS. THE SHUNT PLUGS CAN CAUSE DAMAGE TO THE SQUIB PINS.

(2) Install the shorting or faraday cap, STD-1168 on the squibs.

NOTE: The shorting caps are attached to the fire extinguishing bottles. These shorting caps prevent the squibs from possibly activation due to static electricity.

LOM ALL; AIRPLANES WITH CARGO FIRE EXTINGUISHER BOTTLES AND WITHOUT SEPARATE GROUND STRAP FITTING

SUBTASK 26-23-01-020-055

(3) Remove the screw [9] and washers [8] that attach the ground strap [7] to the discharge head.

LOM ALL; AIRPLANES WITH CARGO FIRE EXTINGUISHER BOTTLES AND WITH SEPARATE GROUND STRAP FITTING

SUBTASK 26-23-01-020-056

(4) Remove the screw [11], nuts [4], and washer [10] that attach the ground strap [7] to the ground strap washer.

LOM ALL

SUBTASK 26-23-01-860-073

(5) Disconnect the discharge tubes from the bottle discharge ports.

SUBTASK 26-23-01-020-048

(6) Remove and discard the lockwires that attach the anti-thrust caps to the discharge tubes.

SUBTASK 26-23-01-420-088

(7) Install the anti-thrust caps on each of the bottle discharge ports.

SUBTASK 26-23-01-420-089

(8) Install the protective caps on each of the discharge tubes.

SUBTASK 26-23-01-020-057

(9) Remove the bolts [2] and washers [3] securing the bottle to the support bracket.

SUBTASK 26-23-01-020-050

WARNING USE SAFE PROCEDURES TO LIFT, REMOVE AND INSTALL THE FIRE BOTTLES. FIRE BOTTLES ARE HEAVY AND CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(10) Use the service handles to remove the bottle.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FORWARD CARGO COMPARTMENT

A

H01809 S0006568328_V2

Cargo Compartment Fire Extinguisher Bottle Installation
Figure 401/26-23-01-990-811 (Sheet 1 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FORWARD CARGO COMPARTMENT

A

H77705 S0006568329_V3

Cargo Compartment Fire Extinguisher Bottle Installation
Figure 401/26-23-01-990-811 (Sheet 2 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO FIRE EXTINGUISHER BOTTLE (EXAMPLE)

B

H01818 S0006568332_V5

Cargo Compartment Fire Extinguisher Bottle Installation
Figure 401/26-23-01-990-811 (Sheet 3 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

C

3027195 S0000798371_V1

Cargo Compartment Fire Extinguisher Bottle Installation
Figure 401/26-23-01-990-811 (Sheet 4 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(EXAMPLE)

C

3027196 S0000798372_V1

Cargo Compartment Fire Extinguisher Bottle Installation
Figure 401/26-23-01-990-811 (Sheet 5 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CONTAINER: FIRE EXTINGUISHING

KA NO | KA SERNO

SPEC CONTROL NO.

WT (LESS DISCH HD/CART)

EMPTY WT (ACTL)	LB	WT EA DISCH HD (NOW)	LB
$CBrF_3$ WT (NOW)	LB	WT EA CART (NOW)	LB
N_2 WT (NOW)	LB	MFG DATE	
TOTAL WT (ACTL)	LB	LAST WT INSP DATE	

IDENTIFICATION PLATE 324269

D

CONTAINER: FIRE EXTINGUISHING

AGENT: $CBrF_3$

LAST HYDRO TEST DATE | WK NO

DATE OF MFG | WK SERIAL NO

GROSS WT EMPTY	TOTAL WT ACTUAL	LAST WT INSPECTION
LB	LB	

WEIGHT OF CHARGE (NOMINAL)

AGENT LB | NITROGEN LB

IDENTIFICATION PLATE 324483

D

3027198 S0000798463_V1

Cargo Compartment Fire Extinguisher Bottle Installation
Figure 401/26-23-01-990-811 (Sheet 6 of 6)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

DISCHARGE HEAD LEAK LOCATIONS

3077041 S0000834581_V1

Cargo Fire Extinguisher Bottle Installation Inspection
Figure 402/26-23-01-990-812

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-23-01-400-802-001

3. Cargo Fire Extinguisher Bottle Installation

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives instructions to install the cargo fire extinguisher bottle.

B. References

Reference	Title
20-40-12-400-802	ESDS Handling for Metal Encased Unit Installation (P/B 201)
26-23-01-100-801	Cargo Fire Extinguishing System Cleaning (P/B 701)
26-23-02-400-801	Cargo Fire Extinguisher Bottle Squib Installation (P/B 401)
26-23-04-000-801	Cargo Fire Extinguishing Filter/Drier Removal (P/B 401)
26-23-04-400-801	Cargo Fire Extinguishing Filter/Drier Installation (P/B 401)
SWPM 20-20-00	ELECTRICAL BONDING PROCESSES

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1550	Bonding Meter - Approved, Intrinsically Safe (Approved for use in Class I, Divisions I & II hazardous (classified) locations. Outside these hazardous locations, COM-614 can be used in lieu of COM-1550). Part #: 620LK Supplier: 1CRL2 Part #: M1 Supplier: 3AD17 Part #: M1B Supplier: 3AD17 Part #: T477W (C15292) Supplier: 06659
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

Reference	Description
COM-17114	Gauge - Force Part #: FDIX 100 Supplier: 0BFD9 Part #: FDIX 50 Supplier: 0BFD9 Opt Part #: FDI 100 Supplier: 0BFD9 Opt Part #: FDI 50 Supplier: 0BFD9 Opt Part #: FDV 100 Supplier: 0BFD9 Opt Part #: FDV 50 Supplier: 0BFD9
COM-25014	Adapter - Pressure (7/8-inch fitting at one end and air shop fitting at the other end) Part #: 4-10XHU6-SS MS33514 Supplier: 99321
COM-25015	Adapter - Pressure (3/4-inch fitting at one end and air shop fitting at the other end) Part #: 4-8XHU6-SS MS33514 Supplier: 99321
STD-1079	Resistor - 10K Ohm or Greater
STD-1168	Cap - Shorting or Faraday Cap
STD-18519	Air Source - Regulated, Dry Filter, 0-60 PSIG

D. Consumable Materials

Reference	Description	Specification
B00130	Alcohol - Isopropyl	TT-I-735
D50004	Compound - Antiseize	BMS3-28
G00034	Cotton Wiper - Process Cleaning Absorbent Wiper (Cheesecloth, Gauze)	AMS3819 Class 1 Grade A or B Form 1 (Supersede BMS15-5 CL A)
G00091	Compound - Oxygen System Leak Detection - Snoop Leak Detector	MIL-PRF-25567
G01048	Lockwire - MS20995C32, Corrosion Resistant Steel - 0.032 Inch (0.8128 mm) Diameter	NASM20995
G50136	Compound - Corrosion Inhibiting, Non-drying Paste	BMS3-38
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38
G51464	Abrasive - Aluminum Oxide paper, 60 grit or finer	

E. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

F. Access Panels

Number	Name/Location
821	Forward Cargo Door

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G. Prepare for the Installation

SUBTASK 26-23-01-860-017-001

(1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-23-01-010-021

(2) Open this access door:

Number	Name/Location
821	Forward Cargo Door

SUBTASK 26-23-01-860-007-001

(3) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-23-01-860-036-001

(4) If it is necessary, remove the air conditioning duct that is in front of the fire extinguisher bottle.

H. Cargo Fire Extinguisher Bottle Installation

SUBTASK 26-23-01-200-001-001

(1) If the previous bottle was discharged, do this task: Cargo Fire Extinguishing System Cleaning, TASK 26-23-01-100-801.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

SUBTASK 26-23-01-420-027-001

(2) If either fire extinguisher bottle 1 or 2 was discharged, remove the filter/dryer in that discharge line and replace it with a new filter/dryer, do these tasks:

- Cargo Fire Extinguishing Filter/Drier Removal, TASK 26-23-04-000-801
- Cargo Fire Extinguishing Filter/Drier Installation, TASK 26-23-04-400-801.

NOTE: For example, if either fire extinguisher bottle 1 or 2 was discharged into the aft cargo compartment, the filter/dryer on the aft discharge line would have to be replaced. The filter/dryer on the forward discharge line would not have to be replaced.

LOM ALL

SUBTASK 26-23-01-420-001-001

(3) Put the cargo fire extinguisher bottle [1] in its position.

> **WARNING** DO NOT TOUCH THE PINS ON THE SQUIB. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(WARNING PRECEDES)

> **WARNING** DO NOT MOVE THE BOTTLE WITHOUT A CAP ON THE PORTS. DO NOT LET THE BOTTLE HIT THE AIRPLANE. BE CAREFUL NOT TO DAMAGE THE BOTTLE. IF THE BOTTLE IS ACCIDENTLY DISCHARGED, IT CAN CAUSE INJURY TO PERSONS.

(a) Before you install the cargo fire extinguisher bottle [1], weigh the bottle in accordance with the manufacturers instructions and make sure that its weight loss is not more than the weight shown in Table 401.

NOTE: Depending on the bottle manufacturer and/or bottle part number, the measured weight marked on the bottle may or may not include some of the protective caps.

Table 401/26-23-01-993-801

Bottle Part Number	Weight Tolerance
473957-X	0.25 lb (0.11 kg)
34600010–XX	0.10 lb (0.05 kg)
474103–X	0.25 lb (0.11 kg)
474140–2	0.25 lb (0.11 kg)

1) Use force gauge, COM-17114, to weigh the bottle.

LOM ALL; AIRPLANES WITH KIDDE FIRE BOTTLES

> **WARNING** USE SAFE PROCEDURES TO LIFT, REMOVE AND INSTALL THE FIRE BOTTLES. FIRE BOTTLES ARE HEAVY AND CAN CAUSE INJURY TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(b) Leave the fill/safety protective cap on the bottle.

LOM ALL; AIRPLANES WITH HTL FIRE BOTTLES

(c) Remove any fill/safety protective cap installed on the bottle.

LOM ALL

(d) Lift the cargo fire extinguisher bottle [1] by the service handles and install the bottle mounting lugs on the support bracket.

SUBTASK 26-23-01-420-002-001

(4) Install the bolts [2] and washers [3] that attach the bottle in the airplane.

LOM ALL; AIRPLANES WITH CARGO FIRE EXTINGUISHER BOTTLES AND WITHOUT SEPARATE GROUND STRAP FITTING

SUBTASK 26-23-01-420-086

(5) Install the ground strap [7] as follows:

(a) Clean the mating surface of the discharge head with 60 grit wet/dry aluminum oxide sandpaper, G51464.

1) Use cotton wiper, G00034, moist in alcohol, B00130, to clean the mating surface of discharge head.

(b) Clean the mating surface of the washers [8], screw [9], and ground strap [7] with cotton wiper, G00034, moist in alcohol, B00130.

1) If it is necessary, use cotton wiper, G00034, to remove remaining solvent.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM ALL; AIRPLANES WITH CARGO FIRE EXTINGUISHER BOTTLES AND WITHOUT SEPARATE GROUND STRAP FITTING (Continued)

(c) Install the screw [9] and washers [8] that attach the ground strap [7] to the discharge head.

1) Tighten the screw [9] to 35 ±3 in-lb (4.0 ±0.3 N·m).

(d) Do a check of the electrical bonding resistance between the ground strap [7] and aircraft structure (SWPM 20-20-00).

1) Use an intrinsically safe approved bonding meter, COM-1550.

2) Make sure that the bonding resistance is 0.001 ohm (1.0 milliohm) or less.

LOM ALL; AIRPLANES WITH CARGO FIRE EXTINGUISHER BOTTLES AND WITH SEPARATE GROUND STRAP FITTING

SUBTASK 26-23-01-420-087

(6) Install the ground strap [7] as follows:

(a) Clean the mating surface of the nuts [4], washer [10], screw [11], ground strap [7], and ground strap washer with cotton wiper, G00034, moist in alcohol, B00130.

1) If it is necessary, use cotton wiper, G00034, to remove remaining solvent.

(b) Install the screw [11], washer [10], and nuts [4] that attach the ground strap [7] to the ground strap washer.

1) Tighten the nuts [4] to 31.5 ±3.5 in-lb (3.6 ±0.4 N·m).

(c) Do a check of the electrical bonding resistance between the ground strap [7] and aircraft structure (SWPM 20-20-00).

1) Use an intrinsically safe approved bonding meter, COM-1550.

2) Make sure that the bonding resistance is 0.001 ohm (1.0 milliohm) or less.

LOM ALL

SUBTASK 26-23-01-020-005-001

(7) If necessary, align the discharge heads to the discharge tubes, do these steps:

(a) Loosen the discharge head gland nuts.

(b) Adjust the discharge heads to get access to the tube connections.

SUBTASK 26-23-01-080-001-001

(8) Remove the anti-thrust caps from each of the discharge ports.

SUBTASK 26-23-01-420-048

(9) Use a lockwire to hang the anti-thrust caps on the discharge tubes.

LOM ALL; AIRPLANES WITH KIDDE FIRE BOTTLES

SUBTASK 26-23-01-420-091

(10) Tighten the gland nuts on to 720 ±60 in-lb (81 ±7 N·m)

(a) Attach MS20995C32 lockwire, G01048, between the gland nuts.

LOM ALL; AIRPLANES WITH HTL FIRE BOTTLES

SUBTASK 26-23-01-420-092

(11) Tighten the gland nuts on to 600 ±60 in-lb (68 ±7 N·m)

(a) Attach MS20995C32 lockwire, G01048, between the gland nuts.

LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-01-200-013

(12) Do a leak check of the FWD and AFT discharge heads of each replaced cargo fire extinguisher bottle as follows:

(a) Connect the 0-60 psig dry filtered regulated air source, STD-18519, to the discharge head.

1) Use pressure adapter, COM-25014, or pressure adapter, COM-25015, to connect the air supply hose to the FWD or AFT discharge head.

(b) Slowly apply pressure 54 psig (372 kPa) - 56 psig (386 kPa) to the discharge head.

(c) With a Snoop Leak Detector compound, G00091, make sure that there are no leaks in the locations that follow (Figure 402):

- The air source hose connections.
- Around the gland nut.
- Around the neck of the discharge head.
- Around the squib.

(d) Do a check for changes in air pressure.

1) Isolate the 0-60 psig dry filtered regulated air source, STD-18519, from the fire extinguisher bottle and hold 54 psig (372 kPa) - 56 psig (386 kPa).

2) Record the initial pressure value.

NOTE: Wait for five minutes before recording the final pressure value.

3) Record the final pressure value and make sure that the pressure does not decrease more than 0.5 psig (3.4 kPa).

4) If the pressure decreases more than 0.5 psig (3.4 kPa), then do the following:

a) Replace the internal O-ring.

b) Check for changes in air pressure.

c) If the pressure continues to decrease, then replace the cargo fire extinguisher bottle.

(e) Reduce the 0-60 psig dry filtered regulated air source, STD-18519, pressure to zero.

(f) Remove the 0-60 psig dry filtered regulated air source, STD-18519, from the fire extinguisher bottle discharge head.

(g) Repeat the steps to check for changes in air pressure for the remaining discharge heads.

SUBTASK 26-23-01-020-021

(13) Remove the protective caps from each of the discharge tubes.

SUBTASK 26-23-01-620-002

WARNING

DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(14) Apply a layer of compound, D50004 (recommended), to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

(a) Permitted alternative anti-corrosion compounds to use in this location are Cor-Ban 27L Compound, G50237, or corrosion inhibiting material, G50136.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-01-420-003-001

(15) Connect the FWD (Yellow) and AFT (Blue) discharge tubes to the discharge ports.

(a) Refer to the outlet identification above each discharge outlet to make sure that the tubes are connected to the correct ports.

SUBTASK 26-23-01-420-005-001

(16) Tighten the nuts on the tube assemblies to torque values in the table below:

Table 402/26-23-01-993-806 Discharge Tube Torque Values

Nut Size	Tube Outer Diameter	Torque (MIN)	Torque (MAX)
7/8 in	1/2 in	266 in-lb (30 N·m)	294 in-lb (33 N·m)
1 in	5/8 in	342 in-lb (39 N·m)	378 in-lb (43 N·m)

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-431, 433, 434, 437-447, 450-999 WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH; AIRPLANES WITH FIRE BOTTLES WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH

SUBTASK 26-23-01-420-007-001

(17) Install the electrical connector to the pressure switch.

(a) Connect a jumper wire between pins 2 and 3 on D12792.

1) Make sure that the DISCH light, on the P8 cargo fire control panel, comes on.

2) Remove the jumper wire.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-431, 433, 434, 437, 438, 440, 442-447, 450-457, 461-463 WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH

(b) Connect a jumper wire between pins 2 and 3 on D12816.

1) Make sure that the DISCH light, on the P8 cargo fire control panel, comes on.

2) Remove the jumper wire.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-431, 433, 434, 437-447, 450-999 WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH; AIRPLANES WITH FIRE BOTTLES WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH

(c) Install the electrical connector to the pressure switch, D12792 on bottle 1.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-431, 433, 434, 437, 438, 440, 442-447, 450-457, 461-463 WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH

(d) Install the electrical connector to the pressure switch, D12816 on bottle 2.

LOM 432; AIRPLANES WITH FIRE BOTTLES WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH

SUBTASK 26-23-01-420-059

(18) Install the electrical connector to the pressure switch.

(a) Connect a jumper wire between pins 2 and 3 on D12792.

1) Make sure that the DISCH light on the cargo fire control panel, P8, comes on.

2) Remove the jumper wire.

(b) Connect a jumper wire between pins 2 and 3 on D12816.

1) Make sure that the DISCH light on the Cargo Fire Control Panel comes on.

2) Remove the jumper wire.

(c) Install the electrical connector to the pressure switch, D12792 on bottle 1.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 432; AIRPLANES WITH FIRE BOTTLES WITHOUT MANUAL OVERRIDE ON THE PRESSURE SWITCH (Continued)

(d) Install the electrical connector to the pressure switch, D12816 on bottle 2.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-431, 433, 434, 437-447, 450-999 WITH MANUAL OVERRIDE ON THE PRESSURE SWITCH; AIRPLANES WITH FIRE BOTTLES WITH MANUAL OVERRIDE ON THE PRESSURE SWITCH

SUBTASK 26-23-01-710-001-001

(19) Do a test of the fire extinguisher pressure switch.

(a) Install the electrical connector to the pressure switch, D12792 on bottle 1.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-431, 433, 434, 437, 438, 440, 442-447, 450-457, 461-463 WITH MANUAL OVERRIDE ON THE PRESSURE SWITCH

(b) Install the electrical connector to the pressure switch, D12816 on bottle 2.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-431, 433, 434, 437-447, 450-999 WITH MANUAL OVERRIDE ON THE PRESSURE SWITCH; AIRPLANES WITH FIRE BOTTLES WITH MANUAL OVERRIDE ON THE PRESSURE SWITCH

(c) Push and hold the pressure switch manual-override button on the fire extinguisher bottle.

(d) Make sure that the yellow DISCH light, on the P8 cargo fire control panel, comes on.

(e) Release the pressure switch manual-override button on the fire extinguisher bottle.

(f) Make sure that the DISCH light, on the P8 cargo fire control panel, goes off.

LOM 432; AIRPLANES WITH FIRE BOTTLES WITH MANUAL OVERRIDE ON THE PRESSURE SWITCH

SUBTASK 26-23-01-710-003

(20) Do a test of the fire extinguisher pressure switch.

(a) Install the electrical connector to the pressure switch, D12792 on bottle 1.

(b) Install the electrical connector to the pressure switch, D12816 on bottle 2.

(c) Push and hold the pressure switch manual-override button on the fire extinguisher bottle.

(d) Make sure that the yellow DISCH light on the cargo fire control panel, P8, comes on.

(e) Release the pressure switch manual-override button on the fire extinguisher bottle.

(f) Make sure that the DISCH light on the cargo fire control panel, P8, goes off.

LOM ALL

I. Connect the Bottle Squib Connectors

SUBTASK 26-23-01-420-008-001

(1) If the squib is not installed on the fire extinguisher bottle, do this task: Cargo Fire Extinguisher Bottle Squib Installation, TASK 26-23-02-400-801.

SUBTASK 26-23-01-420-009-001

(2) Do this to install the electrical connector and test the FWD squib:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WARNING DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Before the squib is touched, do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

SUBTASK 26-23-01-700-001

WARNING MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN FIRE SUDDENLY AND CAUSE INJURY TO PERSONNEL.

(3) Do these steps to make sure that there is no stray voltage at the electrical squib connector

Fire Bottle Squib Electrical Connector

	Engine	APU	Cargo
Connector Pins	3 and 4, and 6 and 7	3 and 4	1 and 2

(a) Connect the digital/analog multimeter, COM-1793, across the two pins.

(b) Make sure that the current is less than 5 milliamps AC, and less than 5 milliamps DC.

(c) Connect a resistor, STD-1079, across the multimeter probes.

(d) Make sure that the voltage is less than .250 volts AC, and less than 0.250 volts DC.

(e) If it is necessary, repeat the steps above for the other squib electrical connectors.

(f) Disconnect the multimeter.

SUBTASK 26-23-01-420-039

(4) Make sure that the electrical connector is not damaged.

(a) Make sure that the squib pins are not bent or damaged.

NOTE: The squib pins can cause damage to the connector if the pins do not enter the electrical connector receptacles.

SUBTASK 26-23-01-420-072

(5) Remove the shorting or faraday cap, STD-1168, from the FWD squib.

SUBTASK 26-23-01-420-060

(6) Make sure that the squib pins are not bent or damaged.

SUBTASK 26-23-01-420-061

CAUTION MAKE SURE THAT THE SQUIB PINS CORRECTLY ENGAGE THE ELECTRICAL CONNECTOR. IF NOT, DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.

(7) Connect electrical connector D12794 to the forward fire extinguisher bottle squib on bottle 1.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

SUBTASK 26-23-01-420-062

> **CAUTION** MAKE SURE THAT THE SQUIB PINS CORRECTLY ENGAGE THE ELECTRICAL CONNECTOR. IF NOT, DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.

(8) Connect electrical connector D12818 to the forward fire extinguisher bottle squib on bottle 2.

LOM ALL

SUBTASK 26-23-01-860-054

(9) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-23-01-700-002

(10) Push and hold the TEST switch, on the P8 cargo fire control panel.

(a) Make sure that the green FWD EXT light, on the P8 cargo fire control panel, comes on.

(b) Make sure that the green AFT EXT light stays off.

SUBTASK 26-23-01-700-011

(11) Release the TEST switch.

(a) Make sure that the green FWD EXT light goes off.

SUBTASK 26-23-01-860-018-001

(12) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-23-01-710-005

(13) Do this to install the electrical connector and test the AFT squib:

> **WARNING** DO NOT TOUCH THE SQUIB BEFORE YOU DO THE PROCEDURES FOR DEVICES THAT ARE SENSITIVE TO ELECTROSTATIC DISCHARGE. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(a) Before the squib is touched, do this task: ESDS Handling for Metal Encased Unit Installation, TASK 20-40-12-400-802.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-01-700-003

> **WARNING** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN FIRE SUDDENLY AND CAUSE INJURY TO PERSONNEL.

(14) Do these steps to make sure that there is no stray voltage at the electrical squib connector

Fire Bottle Squib Electrical Connector

	Engine	APU	Cargo
Connector Pins	3 and 4, and 6 and 7	3 and 4	1 and 2

(a) Connect the digital/analog multimeter, COM-1793, across the two pins.

(b) Make sure that the current is less than 5 milliamps AC, and less than 5 milliamps DC.

(c) Connect a resistor, STD-1079, across the multimeter probes.

(d) Make sure that the voltage is less than .250 volts AC, and less than 0.250 volts DC.

(e) If it is necessary, repeat the steps above for the other squib electrical connectors.

(f) Disconnect the multimeter.

SUBTASK 26-23-01-420-040

(15) Make sure that the electrical connector is not damaged.

NOTE: The squib pins can cause damage to the connector if the pins do not enter the electrical connector receptacles.

SUBTASK 26-23-01-420-071

(16) Remove the shorting or faraday cap, STD-1168, from the AFT squib.

SUBTASK 26-23-01-420-063

(17) Make sure that the squib pins are not bent or damaged.

SUBTASK 26-23-01-420-064

> **CAUTION** MAKE SURE THAT THE SQUIB PINS CORRECTLY ENGAGE THE ELECTRICAL CONNECTOR. IF NOT, DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.

(18) Connect electrical connector D12796 to the aft fire extinguisher bottle squib on bottle 1.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

SUBTASK 26-23-01-420-065

> **CAUTION** MAKE SURE THAT THE SQUIB PINS CORRECTLY ENGAGE THE ELECTRICAL CONNECTOR. IF NOT, DAMAGE TO THE ELECTRICAL CONNECTOR CAN OCCUR.

(19) Connect electrical connector D12820 to the aft fire extinguisher bottle squib on bottle 2.

LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-01-860-055

(20) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-23-01-700-004

(21) Push and hold the TEST switch, on the P8 cargo fire control panel.

(a) Make sure that the green FWD and AFT EXT lights, on the P8 cargo fire control panel, come on.

SUBTASK 26-23-01-700-012

(22) Release the TEST switch.

(a) Make sure that the green FWD and AFT EXT lights go off.

J. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-01-410-001-001

(1) If it was removed, install the air conditioning duct in front of the fire extinguisher bottle.

SUBTASK 26-23-01-410-002-001

(2) Install the liner at the aft end of the forward cargo compartment.

SUBTASK 26-23-01-410-003-001

(3) Close this access door:

Number	Name/Location
821	Forward Cargo Door

——— **END OF TASK** ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO COMPARTMENT FIRE EXTINGUISHING SYSTEM - CLEANING/PAINTING

1. General

A. The cargo fire extinguishing system should be cleaned whenever the cargo compartment fire bottle is discharged.

B. Only the compartment in which the bottle was discharged requires cleaning.

C. This procedure has tasks to clean the cargo fire extinguishing system.

TASK 26-23-01-100-801

2. Cargo Fire Extinguishing System Cleaning

A. Tools/Equipment

Reference	Description
STD-1325	Source - Pressure, Capable of Supplying 35 +/- 5 PSIG

B. Consumable Materials

Reference	Description	Specification
D50004	Compound - Antiseize	BMS3-28
G50136	Compound - Corrosion Inhibiting, Non-drying Paste	BMS3-38
G50237	Compound - Corrosion Inhibiting, Non-drying - Cor-Ban 27L	BMS3-38

C. Location Zones

Zone	Area
121	Forward Cargo Compartment - Left
122	Forward Cargo Compartment - Right
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right
141	Aft Cargo Compartment - Left
142	Aft Cargo Compartment - Right

D. Access Panels

Number	Name/Location
821	Forward Cargo Door
822	Aft Cargo Door

E. Prepare for Cleaning

SUBTASK 26-23-01-860-011

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-01-010-003

(2) Open this access panel:

Number	Name/Location
821	Forward Cargo Door

SUBTASK 26-23-01-010-004

(3) To access the discharge nozzles in the aft cargo bay, open this access panel:

Number	Name/Location
822	Aft Cargo Door

SUBTASK 26-23-01-860-012

(4) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-23-01-860-013

(5) If it is necessary, remove the air conditioning duct that is in front of the fire extinguishing bottle.

SUBTASK 26-23-01-020-006

(6) Disconnect the applicable discharge tube from the fire extinguisher bottle discharge head.

SUBTASK 26-23-01-020-007

(7) Remove the discharge nozzles from the discharge tubes in the applicable cargo bay.

(a) Remove the four screws [6] securing the retainer [5] to the bracket.

(b) Remove the cargo ceiling as required to gain access to the nut.

(c) Remove the two screws [4] securing the discharge nozzle [3] to the pan cover assembly [7].

(d) Remove the discharge nozzle [3].

F. Procedure

SUBTASK 26-23-01-100-001

(1) Make sure the nozzle is clear of unwanted materials.

SUBTASK 26-23-01-480-002

(2) Connect a pressure source, STD-1325 to the applicable cargo bottle discharge tube.

(a) Make sure air is flowing through all the discharge tubes in the cargo compartment.

SUBTASK 26-23-01-080-002

(3) Remove the pressure source from the discharge tube.

G. Put the airplane back to its usual condition.

SUBTASK 26-23-01-420-011

(1) Connect the discharge tube to the discharge outlet on the bottle.

WARNING

DO NOT GET THE CORROSION-INHIBITING COMPOUND ON YOUR SKIN, IN YOUR EYES, OR ON YOUR CLOTHES. THE COMPOUND IS POISONOUS AND FLAMMABLE. USE APPROVED GLOVES, AND EYE PROTECTION. MAKE SURE THAT THERE IS GOOD AIRFLOW IN THE WORK AREA. KEEP THE COMPOUND AWAY FROM SPARKS AND FLAMES. THE COMPOUND CAN CAUSE INJURIES TO PERSONNEL AND DAMAGE TO EQUIPMENT.

(a) Apply a layer of compound, D50004 (preferred) to the outlet threads, outlet end, and outlet inner diameter where the tube assembly attaches to the discharge head.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1) Cor-Ban 27L Compound, G50237 or corrosion inhibiting material, G50136 are also acceptable alternatives as anti-corrosion compounds to use in this location.

(b) Connect the tube assembly to the discharge head.

NOTE: Yellow is used to show the plumbing which supplies extinguishant to cargo compartment number 1. Blue is used to show the plumbing which supplies extinguishant to cargo compartment number 2.

(c) Remove any unwanted compound.

(d) Tighten the nut on the applicable tube assembly 266 in-lb (30 N·m) to 294 in-lb (33 N·m) for the FWD (1/2 inch) nut or 342 in-lb (39 N·m) to 378 in-lb (43 N·m) for the AFT (5/8 inch) nut.

SUBTASK 26-23-01-860-014

(2) Install the air conditioning duct that is in front of the fire extinguishing bottle if it was previously removed.

SUBTASK 26-23-01-860-015

(3) Install the lining at the aft end of the forward cargo compartment.

SUBTASK 26-23-01-420-012

(4) Install the discharge nozzles on the discharge tubes.

(a) Install the discharge nozzle [3], spacer [2], and pan cover assembly [7] on the discharge tube and hand tighten.

NOTE: Make sure the pan cover line up with those in the bracket. Make sure the holes in the discharge nozzle [3] and spacer [2] line up with those in the pan cover assembly.

(b) Tighten the nut 360 ±18 in-lb (41 ±2 N·m).

(c) Secure the discharge nozzle [3] with screws [4].

(d) Install the cargo ceiling.

(e) Position the spacer [1] and retainer [5], and secure with screws [6].

SUBTASK 26-23-01-860-041

(5) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2431863 S0000562122_V1

Cargo Bay Fire Extinguishing System Discharge Nozzle Cleaning
Figure 701/26-23-01-990-803

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO COMPARTMENT FIRE EXTINGUISHER BOTTLE SQUIB - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

LOM 423, 424, 439, 441, 458-460, 464-999

B. A cargo fire extinguisher bottle is installed in the mix manifold bay, in the aft end of the lower fwd cargo compartment. The fire extinguisher bottle has two discharge cartridges (squibs).

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

C. The cargo fire extinguisher bottles are installed in the mix manifold bay, in the aft end of the lower fwd cargo compartment. Each fire extinguisher bottle has two discharge cartridges (squibs).

LOM ALL

D. This procedure has tasks to remove and install the cargo fire extinguisher bottle squibs.

TASK 26-23-02-000-801

2. Cargo Fire Extinguisher Bottle Squib Removal

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives instructions to remove the Cargo Fire Extinguisher Bottle discharge cartridge (squib) [1].

B. References

Reference	Title
20-10-33-000-801	Power Device Cartridge (Squib) Removal (P/B 401)

C. Tools/Equipment

Reference	Description
STD-1168	Cap - Shorting or Faraday Cap

D. Consumable Materials

Reference	Description	Specification
G01048	Lockwire - MS20995C32, Corrosion Resistant Steel - 0.032 Inch (0.8128 mm) Diameter	NASM20995

E. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

F. Access Panels

Number	Name/Location
821	Forward Cargo Door

ECCN 9E991 BOEING PROPRIETARY - See title page for details

G. Prepare for the Removal

SUBTASK 26-23-02-860-002

(1) Open these circuit breakers and install safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-23-02-010-012

(2) Open this access door:

Number	Name/Location
821	Forward Cargo Door

SUBTASK 26-23-02-010-002

(3) Remove the lining at the aft end of the forward cargo compartment to get access to the air conditioning distribution bay.

SUBTASK 26-23-02-860-003

(4) If it is necessary, remove the air conditioning duct that is in front of the fire extinguishing bottle.

H. Cargo Fire Extinguisher Bottle Squib Removal

SUBTASK 26-23-02-860-018

(1) Before you touch the discharge cartridge (squib) [1], do the procedure for devices that are sensitive to electrostatic discharge (TASK 20-10-33-000-801).

SUBTASK 26-23-02-020-001

WARNING DO NOT TOUCH THE PINS ON THE SQUIB. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.

(2) Disconnect the electrical connectors from the applicable squib.

(a) FWD discharge cartridge (squib) [1] (M2249) connector, D12794.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

(b) FWD Squib (M2264) connector, D12818.

LOM ALL

(c) AFT discharge cartridge (squib) [1] (M2250) connector, D12796.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

(d) AFT Squib (M2265) connector, D12820.

LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-02-480-001

WARNING

DO NOT MOVE OR TOUCH THE CARTRIDGE WITHOUT A SHORTING CAP OR FARADAY CAP INSTALLED ON THE ENDS OF THE SQUIB. THE SQUIB IS AN EXPLOSIVE DEVICE. ACCIDENTAL OPERATION OF THE SQUIB CAN CAUSE INJURY TO PERSONS.

CAUTION

DO NOT PUT SHUNT PLUGS ON THE FIRE BOTTLE SQUIBS. THE SHUNT PLUGS CAN CAUSE DAMAGE TO THE SQUIB PINS.

(3) Install the shorting or faraday cap, STD-1168, on discharge cartridge (squib) [1].

NOTE: The shorting caps are attached to the fire extinguishing bottles. These shorting caps prevent the squibs from possible activation due to static electricity.

SUBTASK 26-23-02-020-002

(4) Remove the MS20995C32 lockwire, G01048, from the discharge cartridge (squib) [1] if present.

SUBTASK 26-23-02-020-003

(5) Remove the discharge cartridge (squib) [1] from the discharge head.

SUBTASK 26-23-02-020-008

(6) Remove and discard the o-ring [3] .

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FORWARD CARGO COMPARTMENT

A

H01826 S0006568349_V2

Cargo Compartment Fire Extinguisher Bottle Squib Installation
Figure 401/26-23-02-990-801 (Sheet 1 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

FORWARD CARGO COMPARTMENT

A

H77706 S0006568350_V2

Cargo Compartment Fire Extinguisher Bottle Squib Installation
Figure 401/26-23-02-990-801 (Sheet 2 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Cargo Compartment Fire Extinguisher Bottle Squib Installation
Figure 401/26-23-02-990-801 (Sheet 3 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO FIRE EXTINGUISHER BOTTLE

B

(EXAMPLE)

C

2 BOTTLES WITHOUT SEPARATE GROUND LUG FITTING

N89602 S0006568356_V6

Cargo Compartment Fire Extinguisher Bottle Squib Installation
Figure 401/26-23-02-990-801 (Sheet 4 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-23-02-400-801

3. Cargo Fire Extinguisher Bottle Squib Installation

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives instructions to install the Cargo Fire Extinguisher Bottle Squib.

B. References

Reference	Title
20-10-33-400-801	Power Device Cartridge (Squib) Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-1793	Multimeter - Digital/Analog (or equivalent meter meets task requirements) Part #: 117 Supplier: 89536 Part #: 260-8XPI Supplier: 55026 Part #: 287 Supplier: 89536 Part #: 289 Supplier: 89536 Part #: 87V Supplier: 89536 Part #: FLUKE 27 II Supplier: 89536 Part #: FLUKE-77-4 Supplier: 89536 Opt Part #: 187 Supplier: 89536 Opt Part #: 189 Supplier: 89536 Opt Part #: 21 Supplier: 89536 Opt Part #: 27 Supplier: 89536 Opt Part #: 77 SERIES III Supplier: 89536 Opt Part #: 87 Supplier: 89536 Opt Part #: FLUKE 27 Supplier: 89536 Opt Part #: MODEL 27 Supplier: 89536
STD-1079	Resistor - 10K Ohm or Greater
STD-1168	Cap - Shorting or Faraday Cap

D. Consumable Materials

Reference	Description	Specification
D50284	Lubricant - O-Ring - Silicone	
D50287	Lubricant - O-Ring, Drilube 822 (MMS-N306A)	

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Discharge cartridge (squib)	26-23-01-21A-030	LOM ALL
		26-23-01-21A-070	LOM ALL
		26-23-01-22A-015	LOM ALL
		26-23-01-22A-020	LOM ALL
3	O-ring	26-23-01-21A-055	LOM ALL
		26-23-01-21A-090	LOM ALL
		26-23-01-22A-030	LOM ALL

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(Continued)

AMM Item	Description	AIPC Reference	AIPC Effectivity
3 (cont.)		26-23-01-22A-035	LOM ALL

F. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

G. Access Panels

Number	Name/Location
821	Forward Cargo Door

H. Prepare for the Installation

SUBTASK 26-23-02-860-005

(1) Make sure that these circuit breakers are open and have safety tags:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-23-02-010-013

(2) Open this access door:

Number	Name/Location
821	Forward Cargo Door

SUBTASK 26-23-02-010-004

(3) Remove the lining at the aft end of the forward cargo compartment to get access to the mix manifold bay.

I. Cargo Fire Extinguisher Bottle Squib Installation

SUBTASK 26-23-02-420-001

(1) Do these steps to install the discharge cartridge (squib) [1]:

> **WARNING** DO NOT TOUCH THE PINS ON THE SQUIBS. ELECTROSTATIC DISCHARGE CAN CAUSE THE FIRE BOTTLE TO RELEASE ITS CONTENTS SUDDENLY AND CAUSE INJURY TO PERSONS AND DAMAGE TO EQUIPMENT

(a) Before you touch the discharge cartridges (squibs) [1], do the procedure for devices that are sensitive to electrostatic discharge (TASK 20-10-33-400-801).

(b) For Pacific Scientific Squibs, lubricate a new o-ring [3] with O-ring lubricant, D50287.

(c) For Kidde squibs, lubricate a new o-ring [3] with SLUBE 884-2, D50284.

(d) Install a new o-ring [3] on the discharge cartridge (squib) [1].

(e) Install the discharge cartridge (squib) [1] in the discharge head.

(f) Tighten the discharge cartridge (squib) [1] to 90 in-lb (10 N·m) - 100 in-lb (11 N·m).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-23-02-700-001

> **WARNING** MAKE SURE THERE IS NO VOLTAGE AT THE ELECTRICAL CONNECTOR. IF THERE IS A VOLTAGE AT THE ELECTRICAL CONNECTOR, THE SQUIB CAN FIRE SUDDENLY AND CAUSE INJURY TO PERSONNEL.

(2) Do these steps to make sure that there is no stray voltage at the electrical squib connector

Fire Bottle Squib Electrical Connector

	Engine	APU	Cargo
Connector Pins	3 and 4, and 6 and 7	3 and 4	1 and 2

(a) Connect the digital/analog multimeter, COM-1793, across the two pins.

(b) Make sure that the current is less than 5 milliamps AC, and less than 5 milliamps DC.

(c) Connect a resistor, STD-1079, across the multimeter probes.

(d) Make sure that the voltage is less than .250 volts AC, and less than 0.250 volts DC.

(e) If it is necessary, repeat the steps above for the other squib electrical connectors.

(f) Disconnect the multimeter.

SUBTASK 26-23-02-420-006

(3) Make sure that the electrical connector is not damaged.

NOTE: The squib pins can cause damage to the electrical connector if the pins do not correctly engage with the electrical connector.

SUBTASK 26-23-02-020-015

(4) Remove the shorting or faraday cap, STD-1168, from the discharge cartridge (squib) [1].

SUBTASK 26-23-02-860-023

(5) Make sure that the discharge cartridge (squib) [1] pins are not bent or damaged.

SUBTASK 26-23-02-420-013

(6) Connect the electrical connector to the fire bottle discharge cartridge (squib) [1].

SUBTASK 26-23-02-420-014

(7) If necessary, install lockwire [2] between the discharge cartridge (squib) [1] and discharge outlet.

J. Cargo Fire Extinguisher Bottle Squib Installation Test

SUBTASK 26-23-02-860-007

(1) Remove the safety tags and close these circuit breakers:

CAPT Electrical System Panel, P18-3

Row	Col	Number	Name
LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463			
B	16	C01528	CARGO FIRE EXT 2
LOM ALL			
B	17	C01526	CARGO FIRE EXT 1

SUBTASK 26-23-02-710-001

(2) On the cargo fire control panel, push and hold the TEST switch.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) Make sure that the green FWD and AFT squib test lights on the cargo fire control panel come on.

SUBTASK 26-23-02-710-002

(3) Release the TEST switch.

(a) Make sure that the green FWD and AFT squib test lights go off.

K. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-02-410-001

(1) If it was removed, install the air conditioning duct in front of the fire extinguishing bottle.

SUBTASK 26-23-02-410-002

(2) Install the lining at the aft end of the forward cargo compartment.

SUBTASK 26-23-02-410-003

(3) Close this access door:

Number	Name/Location
821	Forward Cargo Door

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CARGO FIRE EXTINGUISHING FILTER/DRIER - REMOVAL/INSTALLATION

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) Removal of the filter/drier for the cargo fire extinguishing system

(2) Installation of the filter/drier for the cargo fire extinguishing system

C. The metering assemblies are used to meter and dry the extinguishant. They are installed in the mix bay. The metering assemblies control the rate of flow of extinguishant to the selected cargo compartment and keeps the concentration of extinguishant constant for 195 minutes.

D. After the cargo fire extinguishing bottles are discharged, you must replace the fire extinguishing bottles, the squibs, the applicable metering assemblies.

TASK 26-23-04-000-801

2. Cargo Fire Extinguishing Filter/Drier Removal

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives instructions to remove the Cargo Fire Extinguishing Filter/Drier.

B. References

Reference	Title
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner - Removal (P/B 401)

C. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

D. Access Panels

Number	Name/Location
821	Forward Cargo Door

E. Prepare for the Removal

SUBTASK 26-23-04-010-007

(1) Open this access door:

Number	Name/Location
821	Forward Cargo Door

SUBTASK 26-23-04-010-003

(2) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Removal, TASK 25-52-17-000-801.

F. Cargo Fire Extinguishing Filter/Drier Removal

SUBTASK 26-23-04-020-001

(1) Do these steps to remove the filter/drier [1]:

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WARNING

BE CAREFUL WHEN YOU DISCONNECT THE TUBES FROM THE FILTER/DRIER. PRESSURE CAN STAY IN THE TUBING AFTER THE FIRE EXTINGUISHING BOTTLE RELEASES ITS CONTENTS. WHEN YOU RELEASE THE PRESSURE IN THE TUBING, YOU CAN CAUSE INJURIES TO PERSONNEL.

(a) Disconnect the outlet tube from the filter/drier [1].

NOTE: Disconnect the outlet tube before you disconnect the inlet tube. If the tubing is pressurized, it is safer to disconnect the outlet tube first.

(b) Disconnect the inlet tube from the filter/drier [1].

(c) Remove the screw [2], washer [3], spacer [4] and nut [5] that attach the filter/drier [1] to the bracket.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

L05314 S0006568372_V3

Filter/Drier Assembly Installation
Figure 401/26-23-04-990-801

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-23-04-400-801

3. Cargo Fire Extinguishing Filter/Drier Installation

(Figure 401)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task gives instructions to install the Cargo Fire Extinguishing Filter/Drier.

B. References

Reference	Title
25-52-17-000-801	Forward Cargo Compartment Aft Bulkhead Liner - Removal (P/B 401)
25-52-17-400-801	Forward Cargo Compartment Aft Bulkhead Liner - Installation (P/B 401)

C. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Filter/drier	26-20-51-10-045	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463
		26-20-51-10-050	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422, 425-434, 437, 438, 440, 442-447, 450-457, 461-463

D. Location Zones

Zone	Area
125	Air Conditioning Distribution Bay - Left
126	Air Conditioning Distribution Bay - Right

E. Access Panels

Number	Name/Location
821	Forward Cargo Door

F. Cargo Fire Extinguishing Filter/Drier Installation

SUBTASK 26-23-04-010-008

(1) Open this access door:

Number	Name/Location
821	Forward Cargo Door

SUBTASK 26-23-04-010-005

(2) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Removal, TASK 25-52-17-000-801.

SUBTASK 26-23-04-420-001

(3) Do these steps to install the filter/drier [1]:

NOTE: Yellow is used to show the plumbing which supplies extinguishant to the forward cargo compartment. Blue is used to show the plumbing which supplies extinguishant to the aft cargo compartment.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

(a) Put the filter/drier [1] in its position and attach it with the screw [2], washer [3], spacer [4] and nut [5].

(b) Connect the inlet tube to the filter/drier [1].

1) Torque the inlet tube to 265 in-lb (30 N·m) to 290 in-lb (33 N·m).

(c) Connect the outlet tube to the filter/drier [1].

1) Torque the outlet tube to 345 in-lb (39 N·m) to 375 in-lb (42 N·m).

G. Put the Airplane Back to Its Usual Condition

SUBTASK 26-23-04-410-001

(1) Do this task: Forward Cargo Compartment Aft Bulkhead Liner - Installation, TASK 25-52-17-400-801.

SUBTASK 26-23-04-840-001

(2) Close this access door:

Number	Name/Location
821	Forward Cargo Door

——— END OF TASK ———

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LAVATORY WASTE COMPARTMENT FIRE EXTINGUISHING - MAINTENANCE PRACTICES

1. General

A. This procedure contains scheduled maintenance task data.

B. This procedure has these tasks:

(1) A removal/installation of the fire extinguishing bottle in the lavatory waste compartment.

(2) An inspection/check of the fire extinguishing system in the lavatory waste compartment.

C. The fire extinguishing system for the lavatory waste compartment operates automatically when heat is detected in the lavatory waste compartment. When the temperature is hot enough, heat fusible tips on the fire extinguisher bottle melt. The extinguisher fills the waste compartment with an inert gas. A separate temperature indicator inside the waste compartment shows when the temperature has gotten hot.

TASK 26-24-01-900-801

2. Lavatory Waste Compartment Fire Extinguishing Bottle Removal/Installation

(Figure 201)

NOTE: This procedure is a scheduled maintenance task.

A. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-6250	Gauge - Force Part #: LG-1KG Supplier: 92456
STD-1064	Scraper - Phenolic, Hard Resin

B. Consumable Materials

Reference	Description	Specification
A50067	Adhesive - Silicone Rubber - RTV 102 (White)	MIL-A-46106 Group 1 Type 1, BAC5010 Type 60 Class A Grade 1

C. Location Zones

Zone	Area
200	Upper Half of Fuselage

D. Fire Extinguishing Bottle Removal

SUBTASK 26-24-01-010-001

(1) Open the waste compartment door.

SUBTASK 26-24-01-010-004

(2) If it is necessary, open the waste container door to get access to the fire extinguishing bottle [1].

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-464

SUBTASK 26-24-01-020-001

(3) Remove the waste container.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-24-01-020-012

> **CAUTION** PULL UP THE SUPPORT-FIRE EXTINGUISHER CAREFULLY NOT TO BREAK THE NOZZLE OF THE FIRE EXTINGUISHER. IF YOU DO NOT OBEY, THE DAMAGE OF THE EQUIPMENT CAN OCCUR.

(4) Remove the fire extinguishing bottle [1] from the waste compartment as follow:

(a) Remove the screws [9] and washers [8] to remove the support [7] and blanket [6].

(b) Remove the screws [4] and washers [5] to remove the fire extinguishing bottle [1] from the support [7].

LOM 446, 447, 455, 456, 465-999

SUBTASK 26-24-01-020-002

(5) Remove the mounting screws [3] and spacers [2] that hold the fire extinguishing bottle [1] in its position.

LOM 446, 447, 455, 456

SUBTASK 26-24-01-020-003

> **CAUTION** BE CAREFUL WHEN YOU REMOVE THE SEALANT. DO NOT CAUSE A SCRATCH IN THE PAINT AROUND THE NOZZLES. THIS CAN CAUSE DAMAGE TO THE AREA AROUND THE NOZZLES.

(6) Use a hard resin phenolic scraper, STD-1064, and remove the sealant at the bottom of the nozzles.

LOM ALL

SUBTASK 26-24-01-020-004

(7) Hold the fire extinguishing bottle [1] and carefully remove the nozzles through the holes.

SUBTASK 26-24-01-020-005

(8) Remove the fire extinguishing bottle [1].

E. Fire Extinguishing Bottle Installation

SUBTASK 26-24-01-280-001

(1) Use the force gauge, COM-6250, and weigh the fire extinguishing bottle.

NOTE: The total weight of the halon and bottle is shown on the label of the fire extinguishing bottle. Review table below for allowable weight deviations for fire extinguisher bottle.

(a) Replace the bottle if the difference between the weight marked on the bottle and measured weight is more than what is specified in Table 201:

Table 201/26-24-01-993-803 Permitted Weight Loss

Part Number	Max Permitted Weight Loss (grams)
30100022-X	10
A800100-X	10
A825100-X	10
A826300-X	10

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Table 201/26-24-01-993-803 Permitted Weight Loss (Continued)

Part Number	Max Permitted Weight Loss (grams)
A826700-X	10
474276	10
474453-X	10
800100-X	10
21100-3	10
G800100-X	5
G825100-X	5
G826300-X	5
G826700-X	5

SUBTASK 26-24-01-420-001

(2) Put the fire extinguishing bottle [1] in its position and install the nozzles through the holes.

(a) Make sure that the nozzles point into the waste container area.

LOM 446, 447, 455, 456, 465-999

SUBTASK 26-24-01-420-002

(3) Install the mounting screws [3] and spacers [2] that hold the fire extinguishing bottle [1] in its position.

LOM 446, 447, 455, 456

SUBTASK 26-24-01-420-003

(4) Apply RTV 102 adhesive, A50067, in the gap between the holes and nozzles.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-464

SUBTASK 26-24-01-420-007

CAUTION

SET THE FIRE EXTINGUISHER CAREFULLY NOT TO BREAK THE NOZZLE. IF YOU DO NOT OBEY, THE DAMAGE OF THE EQUIPMENT CAN OCCUR.

(5) Install the fire extinguishing bottle [1] to the waste compartment as follow:

(a) Attach the fire extinguishing bottle [1] to the support [7] with the washers [5] and screws [4].

(b) Attach the support [7] with the fire extinguishing bottle [1] and blanket [6] to the waste compartment with the washers [8] and screws [9].

SUBTASK 26-24-01-420-004

(6) Install the waste container in the sink cabinet.

LOM ALL

SUBTASK 26-24-01-410-002

(7) If it is necessary, close the waste container door.

SUBTASK 26-24-01-410-001

(8) Close the waste compartment door.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Lavatory Waste Compartment Fire Extinguishing - Maintenance Practices
Figure 201/26-24-01-990-801 (Sheet 1 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Lavatory Waste Compartment Fire Extinguishing - Maintenance Practices
Figure 201/26-24-01-990-801 (Sheet 2 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Lavatory Waste Compartment Fire Extinguishing - Maintenance Practices
Figure 201/26-24-01-990-801 (Sheet 3 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SEALANT LOCATION

D

1963458 S0000376814_V4

Lavatory Waste Compartment Fire Extinguishing - Maintenance Practices
Figure 201/26-24-01-990-801 (Sheet 4 of 4)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-24-01-200-801

3. **Lavatory Waste Compartment Fire Extinguishing Bottle Inspection/Check**
(Figure 201)

NOTE: This procedure is a scheduled maintenance task.

A. Location Zones

Zone	Area
200	Upper Half of Fuselage

B. Lavatory Waste Compartment Fire Extinguishing Bottle Inspection/Check

SUBTASK 26-24-01-280-002

(1) Open the waste compartment door.

SUBTASK 26-24-01-280-006

(2) Open the waste container door to get access to the fire extinguishing bottle on the inside of the waste compartment.

SUBTASK 26-24-01-020-006

(3) Remove the waste container.

SUBTASK 26-24-01-960-001

(4) Examine the fusible tips on the discharge tubes.

(a) Replace the fire extinguishing bottle and the temperature indicator strip if the fusible tips are melted.

NOTE: The temperature indicator strip is located on top of the waste container.

LOM 446, 447, 455, 456

NOTE: The temperature indicator strip is located on the front of the waste container door.

LOM ALL

SUBTASK 26-24-01-960-002

(5) Examine the temperature indicator strip to see if one or more of the temperature indicators changed from white to black.

(a) If one or more of the temperature indicator slips changed from white to black, replace the temperature indicator strip.

LOM ALL; AIRPLANES WITH FIRE EXTINGUISHING BOTTLE P/N G800100-3 (HALON) or P/N A800100-3 (NON-HALON)

SUBTASK 26-24-01-280-004

(6) Examine the fire extinguishing bottle for corrosion, scratches, or dents.

(a) Replace the fire extinguishing bottle if dents with a depth equal to or greater than 0.125 in. (3.175 mm) or scratches greater than 0.005 in. (0.127 mm) in depth are found.

LOM ALL

SUBTASK 26-24-01-020-008

(7) Install the waste container in the waste compartment.

SUBTASK 26-24-01-280-007

(8) Close the waste container door.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

SUBTASK 26-24-01-280-005

(9) Close the waste compartment door.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LAVATORY WASTE COMPARTMENT - INSPECTION/CHECK

1. **General**

A. This procedure has this task:

(1) Lavatory waste compartment temperature indicator strip inspection.

TASK 26-24-01-210-801

2. **Lavatory Waste Compartment Temperature Indicator Strip Inspection**

(Figure 601)

NOTE: This procedure is a scheduled maintenance task.

A. References

Reference	Title
26-24-01-200-801	Lavatory Waste Compartment Fire Extinguishing Bottle Inspection/Check (P/B 201)

B. Temperature Indicator Strip Inspection

SUBTASK 26-24-01-010-002

(1) Open the waste compartment door to get access to the temperature indicator strip.

SUBTASK 26-24-01-210-001

(2) Examine the temperature indicator strip to see if one or more of the temperature indicators changed from white to black.

(a) If one or more of the temperature indicators changed from white to black, do this task: Lavatory Waste Compartment Fire Extinguishing Bottle Inspection/Check, TASK 26-24-01-200-801.

C. Put the Airplane Back to Its Usual Condition

SUBTASK 26-24-01-010-003

(1) Close the waste compartment door.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

Lavatory Waste Compartment Temperature Indicator Strip Inspection
Figure 601/26-24-01-990-802 (Sheet 1 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

**LAVATORY
(EXAMPLE)**

**WASTE COMPARTMENT
(WASTE COMPARTMENT DOOR IS NOT SHOWN)
(EXAMPLE)**

A

TEMPERATURE INDICATOR STRIP

B

3051812 S0000817182_V2

**Lavatory Waste Compartment Temperature Indicator Strip Inspection
Figure 601/26-24-01-990-802 (Sheet 2 of 3)**

ECCN 9E991 BOEING PROPRIETARY - See title page for details

LAVATORY
(EXAMPLE)

WASTE COMPARTMENT

A

TEMPERATURE INDICATOR STRIP

B

3051811 S0000817180_V1

Lavatory Waste Compartment Temperature Indicator Strip Inspection
Figure 601/26-24-01-990-802 (Sheet 3 of 3)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

HALON FIRE EXTINGUISHERS - REMOVAL/INSTALLATION

1. **General**
   A. This procedure has these tasks:
      (1) A removal of the halon fire extinguisher
      (2) An installation of the halon fire extinguisher.
   B. The extinguisher is mounted on a bracket that has a quick-release strap.

TASK 26-26-01-020-801

2. **Halon Fire Extinguisher Removal**
   (Figure 401)

   A. General
      (1) This task gives instructions to remove the halon fire extinguisher.

   B. Halon Fire Extinguisher Removal

   SUBTASK 26-26-01-030-002
      (1) Release the quick-release strap [2].
      NOTE: There can be one quick-release strap or two quick-release straps.

   SUBTASK 26-26-01-030-003
      (2) Remove the fire extinguisher [1] from the mounting brackets.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

HALON FIRE EXTINGUISHER (EXAMPLE)

1 PLACE METAL NECK OF HALON FIRE EXTINGUISHER INTO MOUNTING BRACKET.

2 THERE CAN BE ONE QUICK-RELEASE STRAP OR TWO QUICK-RELEASE STRAPS.

3054166 S0000819168_V1

Halon Fire Extinguishers Installation
Figure 401/26-26-01-990-802 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

HALON EXTINGUISHER

2873948 S0000679069_V3

Halon Fire Extinguishers Installation
Figure 401/26-26-01-990-802 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-26-01-430-801

3. Halon Fire Extinguisher Installation

(Figure 401)

A. General

(1) This task gives instructions to install the halon fire extinguisher.

B. Halon Fire Extinguisher Installation

SUBTASK 26-26-01-200-004

(1) Do a general visual inspection of the fire extinguisher [1].

SUBTASK 26-26-01-430-001

(2) Make sure that the fire extinguisher [1] is in its correct position in the mounting brackets.

SUBTASK 26-26-01-430-002

(3) Connect the quick-release strap [2].

NOTE: There can be one quick-release strap or two quick-release straps.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-465; AIRPLANES WITH FIRE FIGHTING ENTERPRISES LTD HALON

SUBTASK 26-26-01-350-001

(4) Remove the transit pin [3].

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

HALON FIRE EXTINGUISHERS - INSPECTION/CHECK

1. General

A. This procedure has this task:

(1) An inspection of the halon fire extinguishers.

B.

The portable fire extinguishers are installed in several general locations in the passenger compartment and flight compartment.

If the extinguisher is not easy to see, the location will be identified with a placard. The extinguishers are usually installed in one or more of these areas: galley or lavatory stowage areas, closets, doghouses, near attendant seats. There is one halon extinguisher installed in the flight compartment

C. To service or recharge the fire extinguisher, refer to the applicable vendor manuals.

TASK 26-26-01-200-801

2. Halon Fire Extinguishers - Inspection/Check

(Figure 601)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task includes the steps to examine the halon fire extinguishers.

B. References

Reference	Title
26-26-01-020-801	Halon Fire Extinguisher Removal (P/B 401)
26-26-01-430-801	Halon Fire Extinguisher Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-2529	Gauge - Force, Push/Pull/Spring Scale, 50 Pound Capacity Part #: FDIX 50 Supplier: 0BFD9 Opt Part #: FDI 50 Supplier: 0BFD9 Opt Part #: FDV 50 Supplier: 0BFD9
COM-11525	Gauge - Force, 10-lb capacity Part #: PS-10 Supplier: 1GHM7

D. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
1	Witness wire	26-26-01-99-065	LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-465

E. Location Zones

Zone	Area
200	Upper Half of Fuselage
211	Flight Compartment - Left

ECCN 9E991 BOEING PROPRIETARY - See title page for details

F. Halon Fire Extinguishers Inspection

SUBTASK 26-26-01-210-001

(1) Make sure that the applicable decals, nameplates, and labels are in good condition.

(a) If the applicable decals, nameplates, and labels are in bad condition, replace the damaged decals, nameplates, and labels.

SUBTASK 26-26-01-210-010

(2) Do this task: Halon Fire Extinguisher Removal, TASK 26-26-01-020-801.

SUBTASK 26-26-01-200-005

(3) If the fire extinguisher has a pressure gage installed, make sure that the fire extinguisher has the correct pressure.

SUBTASK 26-26-01-200-003

(4) Weigh the full fire extinguisher (use the given scale in Table 601).

NOTE: A full fire extinguisher includes the pull-out pin, pull-tite seal, hose assembly with hose strap, or nozzle, where necessary.

NOTE: You can use a permitted equivalent scale if it follows the resolution and accuracy requirement in Table 601.

NOTE: The two scales in Table 601 give the same resolution and precision, but the total error is different because of the capacity of the scale. Thus, use the force gauge, COM-11525, as the recommended scale for bottles that have a maximum weight of 10 lb (4.5 kg). Use the gauge, COM-2529, for bottles that have a weight from10.0 lb (4.5 kg) to a maximum of50.0 lb (22.7 kg).

Table 601/26-26-01-993-801 Recommended Scales for Portable Fire Extinguishers

Scale	Bottle Weight	Resolution	Accuracy (%)	Total Error
force gauge, COM-11525, or equivalent	0 lb (0 kg) - 10 lb (4.5 kg)	0.05 lb (22.7 g)	0.2	0.002 lb (1 g)
gauge, COM-2529, or equivalent	10.0 lb (4.5 kg) - 50.0 lb (22.7 kg)	0.05 lb (22.7 g)	0.2	0.10 lb (0.05 kg)

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-465; AIRPLANES WITH KIDDE HALON FIRE EXTINGUISHERS NOT P/N 898052 OR 466090

(a) Compare the measured weight against the weight shown on the applicable decal, nameplate, or label found on the fire extinguisher.

1) If you find a decreased weight, it must be less than 0.125 lb (0.057 kg) from the given weight on the decal, nameplate, or label.

NOTE: A fire extinguisher that has a leak will have a decreased weight of more than 0.125 lb (0.057 kg).

a) If the decreased weight is more than 0.125 lb (0.057 kg), you must replace the fire extinguisher.

2) If it is necessary, write the weight of the fire extinguisher on the applicable decal, nameplate, or label.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-465; AIRPLANES WITH KIDDE HALON FIRE EXTINGUISHERS P/N 898052

(b) Make sure that the weight of the fire extinguisher is 3.5 lb (1.59 kg) - 3.81 lb (1.73 kg).

ECCN 9E991 BOEING PROPRIETARY - See title page for details

1) If the measured weight of the fire extinguisher does not agree with the given weight, replace the fire extinguisher.

LOM 402, 404, 406, 407, 411, 412, 415, 416, 420, 422-434, 437-447, 450-465

SUBTASK 26-26-01-210-002

(5) Make sure that the mounting bracket is attached correctly to the airplane.

SUBTASK 26-26-01-210-011

(6) Do this task: Halon Fire Extinguisher Installation, TASK 26-26-01-430-801.

SUBTASK 26-26-01-210-003

(7) Make sure that the extinguisher is installed tightly to the mounting bracket.

SUBTASK 26-26-01-210-004

(8) Make sure that the handle lockpin [2] and witness wire [1] (pull-tite seal) are correctly installed on the handle.

(a) If the witness wire [1] is missing or broken, replace the witness wire [1] or the fire extinguisher bottle.

SUBTASK 26-26-01-210-006

(9) Make sure that there is no physical damage to the extinguisher.

SUBTASK 26-26-01-210-008

(10) If there are other manufacturer inspection or maintenance procedures that show on the extinguisher, do those procedures.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

PORTABLE FIRE EXTINGUISHER PLACARD

HALON FIRE EXTINGUISHER (EXAMPLE)

F27539 S0006568425_V4

Halon Fire Extinguishers Inspection
Figure 601/26-26-01-990-803 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

**HALON FIRE EXTINGUISHER
(EXAMPLE)**

2405358 S0000556503_V2

**Halon Fire Extinguishers Inspection
Figure 601/26-26-01-990-803 (Sheet 2 of 2)**

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WATER FIRE EXTINGUISHERS- REMOVAL/INSTALLATION

1. **General**
   A. This procedure has these tasks:
      (1) A removal of the water fire extinguisher
      (2) An installation of the water fire extinguisher.
   B. The extinguisher is mounted on a bracket that has a quick-release strap.

TASK 26-26-02-000-801

2. **Water Fire Extinguisher Removal**
   (Figure 401)

   A. General
      (1) This task gives instructions to remove the water fire extinguisher.

   B. Location Zones

Zone	Area
200	Upper Half of Fuselage

   C. Water Fire Extinguisher Removal

SUBTASK 26-26-02-020-006

(1) Unfasten the quick-release strap [2].

SUBTASK 26-26-02-020-001

(2) Remove the water fire extinguisher [1] from the mounting bracket [3] and mounting bracket [4].

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WATER FIRE EXTINGUISHER
(EXAMPLE)

A

2903595 S0000694437_V3

Water-Type Fire Extinguishers Installation
Figure 401/26-26-02-990-802

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-26-02-400-801

3. Water Fire Extinguisher Installation

(Figure 401)

A. General

(1) This task gives instructions to install the water fire extinguisher.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Water Fire Extinguisher Installation

SUBTASK 26-26-02-210-021

(1) Do a general visual inspection of the water fire extinguisher [1].

SUBTASK 26-26-02-420-005

(2) Install the water fire extinguisher [1] in its mounting bracket [3] and mounting bracket [4].

SUBTASK 26-26-02-860-001

(3) Make sure that thewater fire extinguisher [1] fits snugly.

(a) If it is necessary, adjust the location of the mounting bracket [4] to prevent the quick-release strap [2] latch from snagging with the water fire extinguisher [1] cartridge activation handle.

SUBTASK 26-26-02-860-002

(4) Make sure that the water fire extinguisher [1] is readily accessible and rotated with the activation cartridge handle.

SUBTASK 26-26-02-860-003

(5) Make sure that the quick-release strap [2] latch is on the opposite side of the water fire extinguisher [1] cartridge activation handle.

SUBTASK 26-26-02-420-006

(6) Fasten the quick-release strap [2].

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WATER FIRE EXTINGUISHERS - INSPECTION/CHECK

1. General

A. This procedure has a task to inspect the portable water fire extinguishers.

B. The portable fire extinguishers are installed in several general locations in the passenger compartment. If the extinguisher is not easy to see, the location will be identified with a placard. The extinguishers are usually installed in one or more of these areas: galley or lavatory stowage areas, closets, doghouses, near attendant seats.

C. To service or recharge the fire extinguisher, refer to the applicable vendor manuals.

TASK 26-26-02-200-801

2. Water Fire Extinguishers - Inspection/Check

(Figure 601)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) The portable water fire extinguishers are installed in several general locations in the passenger compartment. If the water fire extinguisher is not easy to see, a placard will identify the location. The water fire extinguishers are usually installed in one or more of these areas: galley or lavatory stowage areas, closets, doghouses, near attendant seats.

(2) This task has a weight check of the portable water fire extinguisher assembly and the weight check of the CO^2 cartridge [2].

B. References

Reference	Title
26-26-02-000-801	Water Fire Extinguisher Removal (P/B 401)
26-26-02-400-801	Water Fire Extinguisher Installation (P/B 401)

C. Tools/Equipment

NOTE: When more than one tool part number is listed under the same "Reference" number, the tools shown are alternates to each other within the same airplane series. Tool part numbers that are replaced or non-procurable are preceded by "Opt:", which stands for Optional.

Reference	Description
COM-11525	Gauge - Force, 10-lb capacity Part #: PS-10 Supplier: 1GHM7
COM-16140	Gauge - Force, 2 lb capacity, +/- 0.3 % full scale accuracy Part #: PS-2 Supplier: 1GHM7
STD-252	Ferrule Crimping Tool
STD-753	Scale - Push/Pull, 0-25 pound (0-11 kilogram) Capacity, 1/4 pound (113 gram) Accuracy

D. Consumable Materials

Reference	Description	Specification
D00013	Grease - Aircraft And Instrument Grease	MIL-PRF-23827 (NATO G-354) (Supersedes MIL-G-23827)
G51248	Wire - Seal (P/N 204960)	

ECCN 9E991 BOEING PROPRIETARY - See title page for details

E. Expendables/Parts

AMM Item	Description	AIPC Reference	AIPC Effectivity
3	O-ring	26-26-02-42A-075	LOM 404
		26-26-02-63A-075	LOM 402, 406, 407
		26-26-02-86D-075	LOM 412, 415
		26-26-02-99-115	LOM 411, 416, 420, 422-425, 432-434, 437-442, 445-447, 451-456, 458-999

F. Location Zones

Zone	Area
200	Upper Half of Fuselage

G. Water Fire Extinguishers Inspection

SUBTASK 26-26-02-210-001

(1) Make sure that the instruction decal and the nameplate are in good condition.

SUBTASK 26-26-02-210-010

(2) Do this task: Water Fire Extinguisher Removal, TASK 26-26-02-000-801.

SUBTASK 26-26-02-210-006

(3) Make sure that there is no damage to the water fire extinguisher.

SUBTASK 26-26-02-210-008

(4) Make sure that there are no leaks in the water fire extinguisher.

SUBTASK 26-26-02-210-009

(5) If there are other manufacturer inspection or maintenance procedures that show on the water fire extinguisher, do those procedures.

SUBTASK 26-26-02-210-004

(6) Make sure that the lockwire seal [1] (seal wire, G51248) is correctly installed on the handle.

(a) If the lockwire seal [1] (seal wire, G51248) is missing or broken, do one of the following steps:

1) Replace the water fire extinguisher.

2) Weigh the water fire extinguisher and CO^2 cartridge [2].

a) Do the step to weigh the water fire extinguisher.

b) Do the steps to make sure that the water fire extinguisher is not pressurized and to remove and weigh the CO^2 cartridge [2].

c) If the weight of the water fire extinguisher and the CO^2 cartridge [2] are good, do the step to assemble the cartridge holder.

SUBTASK 26-26-02-210-011

(7) Do a weight check of the portable water fire extinguisher assembly.

(a) Use a force gauge, COM-11525, push/pull scale 0-25 pound (0-11 kilogram), STD-753, or equivalent to make sure that the weight of the water fire extinguisher is not less than the weight shown on the extinguisher nameplate.

SUBTASK 26-26-02-210-019

(8) Make sure that the water fire extinguisher is not pressurized.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WARNING BEFORE YOU DISASSEMBLE THE EXTINGUISHER, MAKE SURE THAT YOU REMOVE ALL THE PRESSURE FROM THE FIRE EXTINGUISHER. WHEN YOU DISASSEMBLE A PRESSURIZED FIRE EXTINGUISHER, IT CAN CAUSE INJURY.

(a) Do a visual check of the fire extinguisher.

1) Make sure that the lockwire seal [1] (seal wire, G51248) is not broken or missing.

2) Make sure that the red line on the valve assembly and the red line on the cartridge holder are aligned.

(b) If the lockwire seal [1] (seal wire, G51248) is broken, missing, or the cartridge holder alignment is not correct, do these steps:

1) Push and hold the valve assembly lever down.

a) If there is air pressure and/or extinguishing agent released at the nozzle, replace the water fire extinguisher.

SUBTASK 26-26-02-020-005

(9) Remove the CO^2 cartridge [2].

(a) Remove and discard the lockwire seal [1].

(b) Turn the cartridge holder counterclockwise and remove it from the valve assembly.

(c) Remove the spring and CO^2 cartridge [2] from the cartridge holder.

1) If the CO^2 cartridge [2] is damaged or used, replace the CO^2 cartridge [2].

(d) Remove the o-ring [3] from the valve assembly.

1) Discard the o-ring [3].

SUBTASK 26-26-02-210-020

(10) Do a weight check of the CO^2 cartridge [2].

(a) Put the CO^2 cartridge [2] on a scale (2 lb force gauge, COM-16140 or equivalent).

(b) Make sure that the CO^2 cartridge [2] weighs a minimum of 0.07 lb (33 g).

1) If the CO^2 cartridge [2] weighs less than 0.07 lb (33 g), discard the CO^2 cartridge [2] and install new.

SUBTASK 26-26-02-420-004

(11) Assemble the cartridge holder.

(a) Put a thin layer of grease, D00013, on the new o-ring [3].

(b) Install the new o-ring [3] in the valve assembly.

(c) Put a thin layer of grease, D00013, on the internal threads of the cartridge holder.

(d) Install the spring and CO^2 cartridge [2] in the cartridge holder.

(e) Install the cartridge holder in the valve assembly and turn the cartridge holder clockwise until:

1) The red line on the cartridge holder aligns with the red line on the valve assembly.

2) The lockwire seal [1] holes in the lock ring and valve assembly are aligned.

(f) Install a new lockwire seal [1] (seal wire, G51248) through the holes in the lock ring and the body of the valve assembly.

1) Make sure that the lockwire seal [1] hole in the lock ring aligns with the hole in the valve assembly.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2) If it is necessary, loosen the setscrews to adjust the position of the lock ring.

(g) Install the wires through the lead seal.

1) Pull the wires tight and crimp the lead seal with crimping tool, STD-252.

NOTE: It is satisfactory to use a standard plier to crimp the lead seal.

SUBTASK 26-26-02-210-002

(12) Make sure that the mounting bracket is attached correctly to the airplane.

SUBTASK 26-26-02-210-012

(13) Do this task: Water Fire Extinguisher Installation, TASK 26-26-02-400-801.

SUBTASK 26-26-02-210-003

(14) Make sure that the water fire extinguisher is installed tightly to the mounting bracket.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

WATER FIRE EXTINGUISHER (EXAMPLE)

F27540 S0006568429_V4

Water-Type Fire Extinguishers Inspection
Figure 601/26-26-02-990-801

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CLEAN AGENT FIRE EXTINGUISHERS - REMOVAL/INSTALLATION

1. General

A. This procedure has these tasks:

(1) A removal of the clean agent fire extinguisher (2-BTP)

(2) An installation of the clean agent fire extinguisher (2-BTP).

B. The extinguisher is mounted on a bracket that has a quick release strap or straps.

TASK 26-26-05-000-801

2. Clean Agent Fire Extinguisher - Removal

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task includes the steps to remove the clean agent fire extinguisher.

(2) The clean agent fire extinguisher is also known as the chemical fire extinguisher.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Clean Agent Fire Extinguisher Removal

LOM 466-999; CLEAN AGENT FIRE EXTINGUISHER WITH SINGLE STRAP BRACKET

SUBTASK 26-26-05-020-002

(1) Disconnect the quick-release strap [2].

LOM 466-999; CLEAN AGENT FIRE EXTINGUISHER WITH DUAL STRAP BRACKET

SUBTASK 26-26-05-020-004

(2) Disconnect the quick-release straps [2].

LOM 466-999

SUBTASK 26-26-05-020-003

(3) Remove the clean agent fire extinguisher [1] from the mounting bracket.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CLEAN AGENT FIRE EXTINGUISHER (EXAMPLE)

1 PLACE METAL NECK OF CLEAN AGENT FIRE EXTINGUISHER INTO MOUNTING BRACKET.

2800766 S0000641807_V2

Clean Agent Fire Extinguisher Installation
Figure 401/26-26-05-990-801 (Sheet 1 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CLEAN AGENT FIRE EXTINGUISHER (EXAMPLE)

1 PLACE METAL NECK OF CLEAN AGENT FIRE EXTINGUISHER INTO MOUNTING BRACKET.

3013632 S0000787297_V1

Clean Agent Fire Extinguisher Installation
Figure 401/26-26-05-990-801 (Sheet 2 of 2)

ECCN 9E991 BOEING PROPRIETARY - See title page for details

TASK 26-26-05-400-801

3. Clean Agent Fire Extinguisher - Installation

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task includes the steps to install the clean agent fire extinguisher.

(2) The clean agent fire extinguisher is also known as the chemical fire extinguisher.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Clean Agent Fire Extinguisher Installation

SUBTASK 26-26-05-210-005

(1) Do a general visual inspection of the clean agent fire extinguisher [1].

SUBTASK 26-26-05-420-001

(2) Put the clean agent fire extinguisher [1] in its correct position on the mounting bracket.

(a) Make sure to put a bottle metal neck of the clean agent fire extinguisher [1] into the mounting bracket.

LOM 466-999; CLEAN AGENT FIRE EXTINGUISHER WITH SINGLE STRAP BRACKET

SUBTASK 26-26-05-420-002

(3) Connect the quick-release strap [2].

LOM 466-999; CLEAN AGENT FIRE EXTINGUISHER WITH DUAL STRAP BRACKET

SUBTASK 26-26-05-420-003

(4) Connect the quick-release straps [2].

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CLEAN AGENT FIRE EXTINGUISHERS - INSPECTION/CHECK

1. **General**
   A. This procedure has a task to inspect the portable fire extinguishers.
   B. The portable fire extinguishers are installed in several general locations in the passenger compartment with a placard. The extinguishers are usually installed in one or more of these areas:

      galley or lavatory stowage areas, closets, doghouses, near attendant seats. There is one extinguisher installed in the flight compartment.

TASK 26-26-05-200-801

2. **Clean Agent Fire Extinguisher - Inspection**

(Figure 601 or Figure 602)

NOTE: This procedure is a scheduled maintenance task.

A. General

(1) This task includes the steps to inspect the clean agent fire extinguisher.

(2) The clean agent fire extinguisher is also known as the chemical fire extinguisher.

(3) The clean agent fire extinguisher contains 3.75 lb (1.70 kg) of Halotron BrX (2-bromotrifluoropropene, 2-BTP).

(a) To push the extinguishing agent from the cylinder, the cylinder/valve assembly is pressurized with nitrogen.

(4) The portable fire extinguishers are installed in the flight compartment and passenger compartment.

(a) If the extinguisher is not easy to see, the location will be identified with a placard.

(5) To service the fire extinguisher, refer to the applicable vendor manuals.

B. Location Zones

Zone	Area
200	Upper Half of Fuselage

C. Clean Agent Fire Extinguisher Inspection

SUBTASK 26-26-05-210-001

(1) Do a visual check of the location of the fire extinguisher.

(a) Make sure that the extinguisher is in its correct location.

(b) Make sure that there is a clear access to the extinguisher.

SUBTASK 26-26-05-210-002

(2) Do a visual check of the clean agent fire extinguisher [1] bottle.

(a) Make sure that the instruction decal and nameplate are in good condition.

(b) Make sure that the operating instructions in the decal are clear.

SUBTASK 26-26-05-211-004

(3) Examine the clean agent fire extinguisher [1] for damage, dents, scratches, gouges, nicks, and loose or missing components.

(a) If the bottle has these damages, discard the clean agent fire extinguisher [1]:

1) Bulges in the bottle.

2) Depth of the dent that is more than 10 percent of the longest dimension of the dent.

ECCN 9E991 BOEING PROPRIETARY - See title page for details

3) Depth of the scratches are more than 0.004 in. (0.102 mm).
4) Scratches longer than 4.00 in. (101.60 mm).
5) Depth of the gouges or nicks are more than 0.004 in. (0.102 mm).
6) Signs of corrosion or line corrosion.
7) A large quantity of corrosion.
8) Fire damage.
9) Heat damage.
10) Damages to the threads.
11) Damages to paint finish.

SUBTASK 26-26-05-211-005

(4) Examine the pressure gauge.
   (a) Inspect the pressure gauge to make sure that the indicator is within the green section.
   (b) If there is damage to the pressure gauge, discard the clean agent fire extinguisher [1] bottle.

SUBTASK 26-26-05-211-006

(5) Examine the nozzle for blockage.
   (a) If the nozzle is damaged, discard the clean agent fire extinguisher [1].

SUBTASK 26-26-05-211-007

(6) Make sure that the pull-tite seal is attached through the loop of the pull-out pin and around the clean agent fire extinguisher [1] bottle.

   NOTE: The lower part of the pull-tite seal must be between the upper and lower handles of the clean agent fire extinguisher.

   (a) If the pull-tite seal is missing or broken, do one of these steps:
      1) Replace the fire extinguisher bottle.
      2) Replace the pull-tite seal:
         a) Install the pull-tite seal through the loop of the pull-out pin and around the valve assembly.
         b) Pull the pull-tite seal tight and crimp the lead seal.

SUBTASK 26-26-05-210-003

(7) Make sure that the mounting bracket is attached correctly to the airplane.

SUBTASK 26-26-05-210-004

(8) Make sure that the extinguisher is installed tightly to the mounting bracket.

END OF TASK

ECCN 9E991 BOEING PROPRIETARY - See title page for details

CLEAN AGENT FIRE EXTINGUISHER (EXAMPLE)

1 PLACE METAL NECK OF CLEAN AGENT FIRE EXTINGUISHER INTO MOUNTING BRACKET.

2800766 S0000641807_V2

Clean Agent Fire Extinguisher Installation
Figure 601/26-26-05-990-802

ECCN 9E991 BOEING PROPRIETARY - See title page for details

2985023 S0000762961_V1

Clean Agent Fire Extinguisher - Pull-Tite Seal Installation
Figure 602/26-26-05-990-803

ECCN 9E991 BOEING PROPRIETARY - See title page for details