



Ministry
of Defence



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29 April 2019

Our Reference: FOI2019/02887

Dear 

Thank you for your letter of 27 February 2019 regarding asbestos within Sea King helicopters. Some of your questions ask for recorded information which falls within scope of the Freedom of Information (FOI) Act 2000, and I am therefore treating the following in line with the requirements of the FOI Act.

- *A full hard copy of the MOD investigation you reference in correspondence dated 5th December 2018 'The MOD investigation, through Leonardo Helicopters (the Air System Coordinating Design Organisation)'.*
- *All copies of risk assessments specifically undertaken around potential exposure to ACM's in relation to the Sea King Helicopter.*
- *All records of any asbestos awareness training given to defence personnel, contractors and visitors working on the Sea King Helicopter.*
- *A record of asbestos awareness training given to defence personnel, contractors and visitors, along with any schedule of delivery and numbers that have undertaken the aforementioned training across the MOD estate.*

A search has now been completed within the Ministry of Defence (MOD) and I can confirm that some information in scope of your request is held. In my letter of 28 March 2019, I advised that some of the information you requested fell within scope of Section 43 of the FOI Act (Commercial Interests). This was specifically in relation to the MOD/Leonardo investigation data. However, on further review and following discussion with Leonardo, it was concluded that this exemption did not apply. Answers to each of your questions are below.

MOD / Leonardo investigation

Under Section 16 of the FOI Act (advice and assistance), I can advise you that this investigation was a collaborative effort between the MOD and Leonardo and involved the systematic review of all components that potentially included Asbestos Containing Materials (ACMs). While no formal report was commissioned, a working spreadsheet to record the investigation of components was produced by the MOD and Leonardo. The latest iteration of this is enclosed at **Annex A**. You should note that the MOD and Leonardo are still working on this issue and earlier versions of this spreadsheet were produced which included data unrelated to the MOD. The enclosure I have

provided here represents the latest position regarding ACM components applicable to the MOD Sea King helicopter.

The MOD/Leonardo review also resulted in a policy document – Maintenance Policy 115 Asbestos Elimination – which provides details of all components affected. As the output of the investigation, this document is enclosed at **Annex B**. Under Section 16 of the FOI Act, you should note that Maintenance Policy 115 was originally published in November 2018 and, as Leonardo/MOD work has progressed on this issue, it is currently being updated to reflect three additional affected components.

Copies of risk assessments relating to exposure to ACMs on Sea King

The MOD holds an overarching risk analysis due to the presence of ACMs within the Sea King design. This was first compiled in 2004 and maintained until the Sea King out of service date. It takes the form of an eCassandra report which is attached at **Annex C**. The Excel extract at **Annex D** should be viewed as an appendix to this report; it provides more detail on the linked hazard data regarding the exposure of aircrew and/or maintenance personnel to asbestos on Sea King. Under Section 16 of the FOI Act (advice and assistance), it may be helpful if I attach some explanatory material about the fields contained within the eCassandra report and the linked hazard data; this is attached at **Annexes E and F**.

Within the MOD, individual risk assessments are also used to manage the risks of specific activities or maintenance. Documentation is required to be held for three years. Prior to the MOD investigation into the use of ACMs on Sea King in July 2018, the risk of exposure to ACMs was not considered sufficiently high to warrant risk assessments for activities on Sea King. Since the potential asbestos hazard was raised, however, two maintenance activities were undertaken which carried the risk of maintainers being exposed to ACMs. Risk assessments were therefore conducted to outline the statutory measures to be taken during exposure and handling of the ACM items during these activities. All personnel associated with Sea King maintenance activities were notified and provided with a copy of the MOD Form 960 (asbestos personal record annotation) for completion. The two relevant risk assessment forms are attached at **Annexes G and H**.

For all risk assessment documents, you should note that names of individuals have been removed in accordance with Section 40 of the FOI Act (Personal Information).

Asbestos awareness training: The MOD holds some information regarding asbestos awareness training, however definitively identifying and extracting asbestos training records that specifically relate to Sea King would require a search of all relevant MOD personnel and maintenance records for the length of time that the platform was in service. We would also need to conduct much wider searches for contractors and visitors, for which information is unlikely to be held.

You also ask for records of general asbestos training given to all defence personnel, contractors and visitors. Again, to answer this, we would need to consult all MOD branches and a wide range of historical records in order to extract information in scope of your request.

Section 12 of the Act makes provision for public authorities to refuse requests for information where the cost of dealing with them would exceed the appropriate limit, which for central government is set at £600. This represents the estimated cost of one person spending 3.5 working days in determining whether the department holds the information, locating, retrieving and extracting the information. We estimate that around 1,000 people worked on Sea King at any one time, which means that, overall, since 1969, many thousands of individuals worked on the platform and would have undertaken related training. Even if we were to restrict a review of Sea King-related training records to a snapshot of 1,000 people working on Sea King at a specific recent time, we estimate that identifying, retrieving and extracting information about training records would take at least 126 hours at a cost of more than £3,000 and this would be likely to be incomplete. Naturally, such an exercise would be increasingly difficult for earlier years.

Under Section 16 of the FOI Act, it may help, however, if I provide you with the number of MOD personnel who have completed general asbestos online training over the last four years. As at 20 March 2019, 8,354 people had registered to complete the online general awareness course for people working in an environment that is known or suspected to contain asbestos materials. In addition, the DE&S Quality, Safety and Environmental Protection (QSEP) team has recently reinvigorated its training on hazardous materials and restricted substances, which is available as classroom training and online. Over the last 18 months, 385 individuals have completed classroom training and more than 500 have completed online training. DE&S QSEP has also hosted a number of masterclasses on the subject to raise awareness across the organisation, with the next one scheduled for May 2019.

If you are not satisfied with the response to these FOI questions or you wish to complain about any aspect of the handling of your request, then you should contact me in the first instance. If informal resolution is not possible and you are still dissatisfied then you may apply for an independent internal review by contacting the Information Rights Compliance team, Ground Floor, MOD Main Building, Whitehall, SW1A 2HB (e-mail CIO-FOI-IR@mod.gov.uk). Please note that any request for an internal review must be made within 40 working days of the date on which the attempt to reach informal resolution has come to an end.

If you remain dissatisfied following an internal review, you may take your complaint to the Information Commissioner under the provisions of Section 50 of the Freedom of Information Act. Please note that the Information Commissioner will not investigate your case until the MOD internal review process has been completed. Further details of the role and powers of the Information Commissioner can be found on the Commissioner's website, <http://www.ico.org.uk>.

While your other points do not fall within scope of the FOI Act, I would like to address them in this letter. You may wish to note that, where not specifically related to Sea King, I have taken your questions to relate to equipment-related asbestos issues.

Firstly, I can assure you that the health and safety of our Armed Forces and employees is of utmost importance, and the MOD is acutely aware of its responsibilities regarding ACMs. With regard to Sea King, we took immediate steps to notify existing service and civilian employees of possible exposure to asbestos and outlined the reporting procedure to be used if people thought they had been exposed. We also issued technical advice detailing the action to be taken to contain the risk when undertaking maintenance and wrote to organisations to whom we had gifted or sold Sea King helicopters. As I am sure you will appreciate, however, identifying and contacting every one of the many thousands of individuals who have worked on the helicopters since their introduction into service in 1969 is not possible. Nonetheless, recognising the concerns that people have regarding this issue, we have instead published guidance for individuals potentially affected on gov.uk at the following link: <https://www.gov.uk/government/news/sea-king-helicopters-asbestos--2>

This guidance explains the steps that individuals should take if they are worried about having been exposed and offers advice on compensation schemes. In relation to medical checks, any individuals who are concerned about potential exposure should seek advice from their GP in the first instance and then follow the reporting guidance outlined on gov.uk as appropriate.

You also asked which exemptions are currently in place that allow ACMs to be fitted to aircraft in service. I can advise that all exemptions of this nature fall under the European Union REACH (Registration, Evaluation, Authorisation and Restriction of Chemicals) regulations. It is worth noting that a REACH exemption is only required if ACMs are imported after 2005, or if new ACMs are fitted to equipment during maintenance activities. The majority of existing defence exemptions have expired over time as the ACM has been eliminated in the supply chain or the equipment has gone out of service and therefore no longer requires a REACH defence exemption. As such, there is currently only one extant asbestos-related defence exemption under REACH.

Finally, you asked what checks are now in place to ensure the supply chain is purged of asbestos components. A significant programme of work is underway to review ACMs in defence equipment,

and to ensure that the risks are analysed and appropriate guidance and policy documents are in place. Where required, we are also reviewing the REACH exemptions with a view to taking action and raising new exemptions where required. Overall, I can assure you that the MOD remains committed to removing ACMs from all defence materiel over time.

I hope this is helpful.

Yours sincerely,


DE&S Secretariat

MOD Risk Assessment Form

MOD Form 5010
(V1.3 Mar 16)

Establishment /Unit/Ship: RNAS Culdrose	Assessment Ref: 849\03\18	Date: 11 Jul 18
Section/Department: 849 NAS	Assessment Type <i>(Note 1) tick as appropriate</i>	
	Specific <input checked="" type="checkbox"/>	Generic <input type="checkbox"/>

Activity/Process: Inspection to ascertain part numbers of Sea King ASaC Mk7 Bowdenflex cable assemblies following discovery that cable assemblies part number WD01-47-90079 contain asbestos, along with accessing port and starboard ECU bay to inspect rear ECU bay seals.	Who is at risk:	
	All staff: <input type="checkbox"/>	
	Operators and/or maintenance staff: <input checked="" type="checkbox"/>	
	Visitors, vulnerable groups, public, etc. : <input type="checkbox"/>	

Ref	Hazard	Existing Control Measures <i>(Note 2)</i>	Significant Residual Risk. Assessment Req'd
1	Exposure to asbestos fibres.	Nil. Access to aircraft prohibited until part numbers of bowdenflex cables are confirmed and removed as required.	Yes
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12			
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Likelihood		Risk Matrix			MOD Form 5010 (V1.3 Mar 16)
Common, regular or frequent occurrence.	3	3 Med	6 High	9 High	
Occasional occurrence.	2	2 Low	4 Med	6 High	
Rare or improbable occurrence.	1	1 Low	2 Low	3 Med	
Severity		1 Minor injury or illness.	2 Serious injury or illness.	3 Fatalities, major injury or illness.	
Hazard Ref	RISK Associated with Hazard (type of incident, injury or ill health)	Risk Rating	Additional Controls Required (Note 3)		
1	Ill health caused by exposure to asbestos fibres. Some part numbers of Bowdenflex cable assemblies and ECU bay seals are manufactured using asbestos.	1x3 Medium	<p>Safe system of work to be developed to allow maintainers to access Sea King ASaC Mk7 port and starboard engine bays to inspect for part numbers and photograph as required. If part number WD01-4790079 is identified, or if no part number is visible, a separate RA is to be raised to allow removal of the Bowdenflex cable assemblies and decontamination of the area. This task is defined as Non-notifiable and Non-licensed work under Asbestos Essential A0 Sheet.</p> <p>Compliance with the following is required:</p> <p>HSE Asbestos Essentials EM6 defines Personal Protective Equipment (PPE) requirement, with SHE Office confirming NATO Stock Numbers (NSNs) for items required.</p> <p>HSE Asbestos Essentials EM7 defines equipment and method statement for using damp rags to clean surfaces of minor asbestos contamination. In the event that the post-Mod part number cannot be positively identified this will be applicable to aircraft surfaces in the vicinity of the port and starboard engine bays and to tools and equipment.</p> <p>HSE Asbestos Essentials EM8 details equipment and method statement for personal decontamination when inspection task is complete.</p> <p>HSE Asbestos Essentials EM9 defines equipment and method for disposing of PPE. EM9 compliant waste bags to be issued by SHE Office. All waste arising is to be double-bagged and labelled in</p>		

			<p>accordance with EM9 and returned to the SHE Dept. (RNAS Culdrose) for disposal.</p> <p>To meet the above, personnel detailed with inspection and removal tasks are to:</p> <ol style="list-style-type: none"> 1. Undertake mandatory asbestos awareness training - this can be achieved by completing DLE module V398N Asbestos Awareness. 2. Be clean-shaven and Fit Tested (Qualitative) on Respiratory Protective Equipment (RPE) by SHE Office. <p>Other control measures:</p> <ol style="list-style-type: none"> 1. Senior Rate to be appointed I/C inspection task and responsible for supervision and compliance with control measures. 2. No more and no fewer than two (2) personnel to be employed on task. 3. Area to be defined and marked out for decontamination/removal and sealing of used PPE & RPE. 4. Bowdenflex cable assemblies part number WD01-47-90079 and assemblies without an identifiable part number are to be replaced with non-asbestos item part number WD01-47-90079-043 under a separate RA.
2	Slips, trips or falls caused by working on aircraft in Personal Protective Equipment.	2x2 Medium	<ol style="list-style-type: none"> 1. PPE boots are not suitable for working at height on aircraft. Standard DMS boots approved for aircraft maintenance are to be worn instead and are to be thoroughly decontaminated in accordance with HSE Asbestos Essentials EM8. Boot laces may trap asbestos fibres so are to be discarded as hazardous waste along with other single-use PPE & RPE. 2. One hundred percent (100%) supervision to be applied to inspection and removal tasks, over and above generic procedures and Risk Assessments in place.

Assessor (Note 4)		Manager (Note 4)		Overall Risk Rating (highest risk)
Name/Signature:		Name/Signature:		
Rank/Grade:		Rank/Grade:		Medium
Post/Role:		Post/Role:		
Manager Assessment Review (Note 4 and 5)				
Date:				Review frequency
Name/Signature:				3 months

Notes:

- 1 If using a 'Generic' risk assessment, Assessors and Managers are to satisfy themselves that the assessment is valid for the task and that all significant hazards have been identified and assessed. If additional hazards are latterly identified they are to be recorded and the Generic assessment updated.
- 2 Only a reference to the safe system of work or simple description of the control measures is required. If the existing control measures reduce the risk to ALARP and the residual risk is considered not to be significant then no further assessment should be needed for the risk relating to that hazard.
- 3 If the risk assessment identifies the need for additional control measures, the risk relating to that hazard and any other hazard s affected by the change will need to be reassessed once the additional controls have been implemented.
- 4 Managers are to note that they are responsible for production of the risk assessment and that by completing this section they acknowledge ownership of the risk and that the risk assessment is suitable and sufficient. Signatures may be required by local procedures where hard copy risk assessments are used but are not necessary for soft copies as electronic signatures provide an audit trail.
- 5 Risk Assessments are to be reviewed:
 - at a frequency proportional to the risk (e.g. high risk – 6 monthly; medium risk – annually; low risk – every 2 years)
 - where required by local instructions/procedures;
 - prior to use if the safe execution of the activity relies on:
 - a permit to work; or
 - stringent adherence to a safe system of work and/or supervision.
 - if there is reason to doubt the effectiveness of the assessment.

- following an accident or near miss.
- following significant changes to the task, process, procedure, personnel or line management.
- following the introduction of more vulnerable personnel.

High	Common, regular or frequent occurrence.	3	3 Med	6 High	9 High
Medium	Occasional occurrence.	2	2 Low	4 Med	6 High
Low	Rare or improbable occurrence.	1	1 Low	2 Low	3 Med
Risk Matrix Likelihood X Severity			1	2	3
			Minor injury or illness.	Serious injury or illness.	Fatalities, major injury or illness.
			Low	Medium	High

High	Rigorous scrutiny of control measures required to ensure ALARP, Improve control measures where possible; consider stopping work. Conducting activities at this level of risk may require formal approval from the appropriate Duty Holder.
Medium	Review control measures and improve if reasonably practicable to do so, consider alternative ways of working.
Low	Maintain control measures and review regularly or if there are any changes.

MOD Risk Assessment Form

MOD Form 5010
(V1.3 Mar 16)

Establishment /Unit/Ship: RNAS Culdrose	Assessment Ref: CU/SHE/849NAS/01?	Date: 6 Jul 18
Section/Department: 849 NAS	Assessment Type <i>(Note 1) tick as appropriate</i>	
	Specific <input checked="" type="checkbox"/>	Generic <input type="checkbox"/>

Activity/Process: Removal of Sea King ASaC Mk7 Exhaust Panel Seals following discovery that seal part numbers WD0110-92800 and WD0110-92800N contain asbestos.	Who is at risk:	
	All staff: <input type="checkbox"/>	
	Operators and/or maintenance staff: <input checked="" type="checkbox"/>	
	Visitors, vulnerable groups, public, etc. : <input type="checkbox"/>	

Ref	Hazard	Existing Control Measures <i>(Note 2)</i>	Significant Residual Risk. Assessment Req'd
1	Exposure to asbestos fibres.	Nil. Access to aircraft prohibited until removal of seal part numbers WD0110-92800 and WD0110-92800N is confirmed.	Yes
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12			
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Likelihood		Risk Matrix			MOD Form 5010 (V1.3 Mar 16)
Common, regular or frequent occurrence.	3	3 Med	6 High	9 High	
Occasional occurrence.	2	2 Low	4 Med	6 High	
Rare or improbable occurrence.	1	1 Low	2 Low	3 Med	
Severity		1 Minor injury or illness.	2 Serious injury or illness.	3 Fatalities, major injury or illness.	
Hazard Ref	RISK Associated with Hazard (type of incident, injury or ill health)	Risk Rating	Additional Controls Required (Note 3)		
1	Ill health caused by exposure to asbestos fibres. Exhaust Seal part numbers WD0110-92800, WD0110-92800N are manufactured using asbestos.	1x3 Medium	<p>Safe system of work to be developed to allow maintainers to access Sea King ASaC Mk7 Exhaust Panel Seals to inspect for part numbers and, if either one of these part numbers is identified or if no part number is visible, to remove the seal and decontaminate the area. This task is defined as Non-notifiable and Non-licensed work under Asbestos Essential A0 Sheet.</p> <p>Compliance with the following is required:</p> <p>HSE Asbestos Essentials EM6 defines Personal Protective Equipment (PPE) requirement, with SHE Office confirming NATO Stock Numbers (NSNs) for items required.</p> <p>HSE Asbestos Essentials EM7 defines equipment and method statement for using damp rags to clean surfaces of minor asbestos contamination. This will be applicable to aircraft surfaces in the vicinity of the Engine Exhaust Wraparound Panels and to tools and equipment.</p> <p>HSE Asbestos Essentials EM8 details equipment and method statement for personal decontamination when inspection and removal task is complete.</p> <p>HSE Asbestos Essentials EM9 defines equipment and method for disposing of PPE and damp rags associated with recovery task. EM9 compliant waste bags to be issued by SHE Office. All waste arising is to be double-bagged and labelled in accordance with EM9 and returned to the SHE Dept. (RNAS Culdrose) for disposal.</p>		

			<p>To meet the above, personnel detailed with inspection and removal task are to:</p> <ol style="list-style-type: none"> 1. Undertake mandatory asbestos awareness training - this can be achieved by completing DLE module V398N Asbestos Awareness. 2. Be clean-shaven and Fit Tested (Qualitative) on Respiratory Protective Equipment (RPE) by SHE Office. <p style="text-align: center;">Other control measures:</p> <ol style="list-style-type: none"> 1. Senior Rate to be appointed I/C inspection/removal task and responsible for supervision and compliance with control measures. 2. No more and no fewer than two (2) personnel to be employed on task. 3. Area to be defined and marked out for removal of seals from Exhaust Wraparound Panels. This area to be thoroughly decontaminated on completion of task. 4. Area to be defined and marked out for sealing of potentially-contaminated seals and rags and for decontamination/removal and sealing of used PPE & RPE. 4. Seal part numbers WD0110-92800 and WD0110-92800N and seals without an identifiable part number are to be replaced with non-asbestos seal part number WD0110-92800-101.
2	Slips, trips or falls caused by working on aircraft in Personal Protective Equipment.	2x2 Medium	<ol style="list-style-type: none"> 1. PPE boots are not suitable for working at height on aircraft. Standard DMS boots approved for aircraft maintenance are to be worn instead and are to be thoroughly decontaminated in accordance with HSE Asbestos Essentials EM8. Boot laces may trap asbestos fibres so are to be discarded as hazardous waste along with other single-use PPE & RPE. 2. One hundred percent (100%) supervision to be applied to inspection and removal tasks, over and above generic procedures and Risk Assessments in place.

Assessor (Note 4)		Manager (Note 4)		Overall Risk Rating (highest risk)
Name/Signature:		Name/Signature:		
Rank/Grade:		Rank/Grade:		
Post/Role:		Post/Role:		Medium
Manager Assessment Review (Note 4 and 5)				
Date:				Review frequency
Name/Signature:				3 months

Notes:

- 1 If using a 'Generic' risk assessment, Assessors and Managers are to satisfy themselves that the assessment is valid for the task and that all significant hazards have been identified and assessed. If additional hazards are latterly identified they are to be recorded and the Generic assessment updated.
- 2 Only a reference to the safe system of work or simple description of the control measures is required. If the existing control measures reduce the risk to ALARP and the residual risk is considered not to be significant then no further assessment should be needed for the risk relating to that hazard.
- 3 If the risk assessment identifies the need for additional control measures, the risk relating to that hazard and any other hazard s affected by the change will need to be reassessed once the additional controls have been implemented.
- 4 Managers are to note that they are responsible for production of the risk assessment and that by completing this section they acknowledge ownership of the risk and that the risk assessment is suitable and sufficient. Signatures may be required by local procedures where hard copy risk assessments are used but are not necessary for soft copies as electronic signatures provide an audit trail.
- 5 Risk Assessments are to be reviewed:
 - at a frequency proportional to the risk (e.g. high risk – 6 monthly; medium risk – annually; low risk – every 2 years)
 - where required by local instructions/procedures;
 - prior to use if the safe execution of the activity relies on:
 - a permit to work; or
 - stringent adherence to a safe system of work and/or supervision.
 - if there is reason to doubt the effectiveness of the assessment.

- following an accident or near miss.
- following significant changes to the task, process, procedure, personnel or line management.
- following the introduction of more vulnerable personnel.

High	Common, regular or frequent occurrence.	3	3 Med	6 High	9 High
Medium	Occasional occurrence.	2	2 Low	4 Med	6 High
Low	Rare or improbable occurrence.	1	1 Low	2 Low	3 Med
Risk Matrix Likelihood X Severity			1	2	3
			Minor injury or illness.	Serious injury or illness.	Fatalities, major injury or illness.
			Low	Medium	High

High	Rigorous scrutiny of control measures required to ensure ALARP, Improve control measures where possible; consider stopping work. Conducting activities at this level of risk may require formal approval from the appropriate Duty Holder.
Medium	Review control measures and improve if reasonably practicable to do so, consider alternative ways of working.
Low	Maintain control measures and review regularly or if there are any changes.

GUIDANCE FOR ANNEX D (DELIVERY TEAM HAZARD/ACCIDENT ANALYSIS)

1. Under Section 16 of the FOI Act, I should like to provide you with some explanatory material for Annex D. The spreadsheet presents qualitative Hazard/Accident analysis completed prior to 2011, and the subsequent enhancement post 2011 as the Delivery Team (DT) transitioned to quantitative analysis. The last review was completed in February 2018. This analysis supported the recorded risk assessments in the eCassandra reports at Annex C.

Qualitative Baseline (pre-2011)

2. The assessment for the probability of Hazard (H) 102 presented in Annex C is also recorded in cell E41 Annex D. The probability was initially assessed as 'occasional'. In accordance with the Safety Management System this translated to a worse case probability of $1.00E^{-04}$ per flying hour (cell E42).

3. The potential accident severity for Accident (A) 103, which could be caused by an occurrence of H102 was qualitatively assessed as 'critical': A single 1st or 2nd party fatality. Cells M41 to M44 record the credible worst-case outcome of A103.

4. The accident probability was assessed qualitatively as 'improbable' (cell J41).

Quantitative Validation (post-2011)

5. Post 2011 the probability assessment for hazards was validated through review of reported in-service incidents and aircraft usage rates. Cell E44 records that the exposure rate to any hazardous material was determined to be $1.50E^{-04}$. There were no recorded in-service events of asbestos exposure or events that were assessed having a common cause to a possible exposure; therefore, the assessment concluded a probability of $1.00E^{-04}$ should be used. (Reflected in cell E46). In addition, it was assessed that there was a high confidence in the reporting of events and therefore sensitivity analysis was not applied (reflected in cell E48).

6. Post 2011, the DT prepared and maintained quantified accident sequence analysis (F41-F44 and G41-G44). The accident sequence was derived using Suitably Qualified and Experienced Personnel (SQEP) judgement and validated through consideration of the number of related incidents. This initial assessment concluded the probability of A103 was $1.00E^{-09}$. This is recorded in cell K42. The accident analysis is then revised to account for the hazard analysis for common causes (E46) at K48 and application of sensitivity analysis (E48) at K51^[1]. Cell K48 records the accident probability adjusted to reflect in service experience as $1.00E^{-09}$. This final assessment of probability supports the eCassandra record for A103.

7. For all accidents assessed as 'critical' the Sea King Safety Management System sentenced the risks as 'as low as reasonably practicable' where the accident probability was less than $1.00E^{-07}$. This conclusion is recorded in the spreadsheet at K41, K44, K47 and K50 for each accident risk assessment.

^[1] Annex D, cell K51 was updated 15 Apr 19 as part of preparation of this Guidance note. K51 previously recorded a post sensitivity analysis assessment of $9.72E^{-09}$ due to an error in the spreadsheet. This was a pessimistic error and did not affect the accident classification recorded in Annex C.

Other Notes

8. Column C was not used for the analysis of H102 and no notes are recorded for the analysis (column L).

9. Cell K45 records the accident probability if the probability of the hazard had been adjusted to reflect the rate of events that could have resulted in exposure to any hazardous material (recorded in E44).

10. Cell K51^[1] records the accident probability if the probability of the hazard had been adjusted to reflect any sensitivity analysis (recorded in E48).

Extracts from eCassandra 'Help' as of 26 Mar 19:

Note: Not all fields are mandatory, only those with an asterisk (*).

Accident Data Fields:

Accident Number

This is a unique number identifying the *Accident*. It is generated automatically within the database when *Accident* progresses beyond "Draft" using the prefix entered in the *Project Initiation* screen when the project is created and selecting the next available *Accident Number*.

Accident Title*

A short summary or title for the *Accident*. Limited to 75 characters.

Note: The *Accident Title* should be unique as far as is possible to assist subsequent interpretation.

Accident Description*

A detailed description of the potential *Accident* covering what the *Accident* is, whom it effects, what the effect is likely to be, etc. and includes physical properties (e.g. mass, energy level etc).

Extra details, such as the date the *Accident* was first identified, can be recorded in this field.

Status

Status of current *Accident*.

Project Phase

The stage of the project in which the *Accident* has been identified.

Use the pull-down list to choose the relevant *Project Life-Cycle Phase*. The default list contains the *Smart Procurement Life-Cycle Phases*.

Originator*

Identifies the user who reported the initial *Accident Data*.

Use the pull-down menu to select the appropriate originator for the *Accident*. This list contains all the project users, but a new originator may be entered in the box below if they are not a member of the project team.

Owner

The authority that has responsibility for the control of the *Accident*. Use the pull-down list to choose the relevant owner.

Accident To

The area that is at risk from the *Accident*. Use the pull-down list to choose the relevant area.

Review Date

The date that an *Accident* must be reviewed.

Where an *Accident's* Status is 'ALARP' and *Controls* with Status of 'Active' are associated with this *Accident*, the system will display the earliest Control End Date as the Accident Review Date. In this case the Review Date will be Read-Only.

In any other case the Accident Review Date will not be automatically calculated and the a future end date can be entered into the field.

Note: If the Review Date of an 'ALARP' *Accident* passes into the past, the Status of the *Accident* will be downgraded to 'Managed'.

Initial Accident Probability

The probability of the *Accident* occurring as defined by the system selected.

Use the pull-down list to select the category to be allocated to the *Probability* of the identified *Accident*.

Initial Accident Severity

The *Severity* category of the *Accident* as defined the system selected. This should be consistent with the ground rules adopted for recording *Accidents*. Use the pull-down list to select the category to be allocated to the possible severity of the identified *Accidents*.

Initial Risk Class

This field is automatically calculated, using the *Accident Severity* and *Accident Probability*, according to the projects *Risk Classification Matrix*.

Accident Post Control Status

Before an *Accident* can be assigned as ALARP or Accepted the Post Control Status section of the *Accident* view must be completed.

This is completed once there is agreement that the control option has been effective. The record includes the data regarding the final classification assessment of the *Accident*.

The fields to be completed are Post Control Probability and Post Control Severity:

Post Control Accident Probability

Final Accident Probability after implementation of all relevant *Controls*. Before an *Accident* can be assigned as ALARP or Accepted the *Post Control Status* section of the *Accident* view must be completed.

Post Control Accident Severity

Final Accident Severity after implementation of all relevant *Controls*. Before an *Accident* can be assigned as ALARP or Accepted the *Post Control Status* section of the *Accident* view must be completed.

Post Control Risk Class

This field is automatically calculated, using the *Post Control Severity* and *Post Control Probability*, according to the projects *Risk Classification Matrix*. Notes

Free text field used to record details of the work and decisions. This field is output on the *Full Accident Report* and so could be used to record minutes of review meetings, etc.

Notes

Field for storing additional notes.

User Definable Field

If this field has been enabled from the *Project Lists/User Defined Fields* option for *Accident* entries, then the *Accident page* displays the field as it has been set up. Use the pull-down list to choose the relevant information as appropriate.

Private

A field to indicate whether the record should be displayed to Read Only Users.

Hazard Data Fields:

Hazard Number

This is a unique number identifying the *Hazard*. It is generated automatically within the database when the *Hazard* progresses beyond "Draft" using the prefix entered in the *Project Initiation Page* when the project is created and selecting the next available *Hazard Reference Number*.

Hazard Title*

A short summary or title for the *Hazard*.

Note: The *Hazard Title* should be unique as far as possible to assist subsequent interpretation.

Hazard Description*

A detailed description of the potential *Hazard* covering what the *Hazard* is, whom it effects, what the effect is likely to be, etc. and includes physical properties (e.g. mass, energy level etc).

Extra details, such as the date the *Hazard* was first identified, can be recorded in this field.

Status

Status of current *Hazard*.

Project Phase

The stage of the project in which the *Hazard* has been identified.

Use the pull-down list to choose the relevant *Project Life-Cycle Phase*. The default list contains the *Smart Procurement Life-Cycle Phases*.

Originator*

Identifies the user who reported the initial *Hazard Data*.

Use the pull-down menu to select the appropriate originator for the *Hazard*. This list contains all the project users but a new originator may be entered in the box below if their name is not in the *Users Form*.

Owner

The authority that has responsibility for the control of the *Hazard*. Use the pull-down list to choose the relevant owner.

Use

Records the method of use when the *Hazard* may be encountered, for example *Storage, Transport, Training, Operation, Maintenance, Disposal*, etc.

Use the pull-down list to identify the use.

Location

Records the *Hazard's* physical locality in the *Location Breakdown Structure*. Use the pull-down menu to select the description of the main area the identified *Hazard* will be physically located. Selecting the gear wheel icon to the left of the *System* field will reveal the *Location breakdown* screen. Highlighting an element of the *Location breakdown* and clicking the **Select** button will record the physical locality for the particular *Hazard*.

System

Records the origin of the *Hazard* within the *System Breakdown Structure*. Use the pull-down menu to select the description of the main area the identified *Hazard* will affect. Selecting the gear wheel icon to the left of the *System* field will reveal the *System breakdown* screen. Highlighting an element of the *System breakdown* and clicking the **Select** button will record the origin for the particular *Hazard*.

Hazard Type

This field records the generic *Hazard Type* which describes the nature of the *Hazard* e.g. *Environmental, Inherent, Functional* etc.

Use the pull-down list to identify the nature of the *Hazard*.

Initial Hazard Probability

The probability of the *Hazard* occurring as defined by the system that has been selected. Use the pull-down list to select the category to be allocated to the probability of the identified *Hazard*.

Use the pull-down list to select the *Hazard's* probability of occurrence.

Post Control Status

Once a *Hazard* is in its open status and before it can be closed, the Post Control Status section within the *Hazard* view should be completed. A pull-down menu is provided listing the Post Control Status probability scores that may be selected.

The Post Control Status may be completed once there is agreement for a post control target for the *Hazard*, or the score achieved from the control option having been effective.

Notes

Field for storing additional notes.

User Definable Field

If this field has been enabled from the *Project Lists/User Defined Fields* option for *Hazard* entries, then the *Hazard* view displays the field as it has been set up. Use the pull-down list to choose the relevant information as appropriate.

Private

A field to indicate whether the record should be displayed to Read Only Users.

Control Data Fields:

Control Number

This is a unique number identifying the *Control*. Initial *Control* entry sets this field to *Draft*. However, after the *Control* has been linked to a *Hazard, Cause or Accident* (as appropriate), the *Control's* status can then be changed beyond *Draft*. The *Control Number* is then automatically generated along with a sequential suffix number.

Note: Linking of Controls to Hazard or Accident Records within eCassandra.

The Cassandra Hazard Management Log tool has been developed to enable mitigation Control Measures to be linked to Hazard Records or Cause Records.

Once a mitigation a Control Measure has been linked to a Hazard or Cause Record, it can not then be linked to an Accident Record.

Emergency measures that are used to mitigate the impact of any possible Accident Record associated with the Hazard Record should be mitigated through the use of specific Accident Control Measures.

Once an Accident Control Measure has been linked to an Accident Record, it may not then be linked to a Hazard.

Control Measures linked to one record set may be duplicated, the duplicated Control Measure may then be linked to the other record set.

Control Title*

A short summary or title for the *Control* (up to 75 characters).

Description

This is a description of the control option being put forward to control the *Hazard, Cause or Accident*. If there is more than one option, a separate form is completed for each, hence the suffix numbers.

Action Window

The *Action Window* identifies the period or time interval during which the *Control* can be effected. The *Action Window* is composed of four parts, a text box, the **Decision Date, Start Date** and **End Date** (The date input will be used to indicate the latest date the *Control* must be selected, in order for the *Control* to be implemented and must be in the future). The text box allows the user to give an explanation of the time period.

Note: If the Control Status is Active, the **End Date** entered here is mandatory.

Control Status

A *Control* may have a *Status* of **Draft, Active, Implemented or Not Used**, a pull-down menu is provided to select the appropriate Status. Before a *Control* can be set to **Active** or **Implemented** the appropriate fields must be completed on this form and it must be *Linked* to a *Hazard, Cause or Accident*. Once a *Control* has been agreed to as **Implemented** the implemented date should be completed.

Change To

Indicates what aspects of the project will be affected by the *Control* (*Design/Documentation/Procedures/Training etc.*)

Implemented

Records the date the *Control* was implemented.

If the *Control* is not implemented then this box should be left blank and the *Control* record will not be approved.

Manager

Identifies the *Manager* responsible for devising and implementing the *Control Options*.

Funded

Indicates whether a Control is *Funded* or *Unfunded*.

Budget Details

Records the information regarding the funding of the control.

Reference Data Fields:

Reference Number

This is a unique number identifying the *Reference* and is automatically generated by eCassandra..

Type

A selection of pre-defined options may be selected from the pull-down menu. These options are:

- Source Data References
- Standards and Statutory Requirements
- Requirements
- Incidents

The choice made influences whether Originator's References, Originator, Status or Paragraph fields are displayed to the user within the *Reference view*.

Source Data References

Source Data References, which identify the *Hazard*, should be referenced using this form, e.g. HAZOPS and technical analyses such as FTAs, FMECAs etc.

Standards and Statutory Requirements

This type of reference refers to national and international standards, such as Def Stan 00-56, Mil Std 882D, British Standards, and statutory requirements, such as the Health & Safety at Work Act, the Environmental Action (1990), Road Traffic Act, Air Navigation Order, JAR

Requirements

This reference category refers to staff requirements, staff targets, etc or contractual requirements between companies.

Incident and Accident Reports

This category is self-explanatory. It is likely that many *Incident or Accident Reports* will be generated during development or in-service. Examples of defence in-service reports are S.2022s, MoD Form 720s and MoD Form 760s.

Serial Number

Enter a suitable reference number for the *Reference*.

Title

Enter the reference document's title.

Hyperlink

Where electronic access to the reference document is available, enter the Hyperlink address. Selection of the Hyperlink address will enable the reference document to be displayed provided access to it is enabled (this is outside the scope of eCassandra).

Note: Links to external websites need to include the "http://" prefix for the application to link to them directly.

Originator

If the originator for the reference document is known, enter this information (or similar information, e.g. page or paragraph number).

Originator Ref

If the originator for the reference document has their own specific reference, enter this information (or similar information, e.g.: Chapter or Section).

Status

This field is displayed if **Requirements** is chosen for the *Reference Type*. Enter the current status for the Requirement, for example these could include: Draft status, Issue 1, Release Data.

Paragraph

This field is displayed if **Requirements** is chosen for the *Reference Type*. Enter the appropriate paragraph reference, for example: F23, Para 40. This field is limited to 20 characters.



Accident Full Report

Report Summary

Generated on 18 March 2019

Number of Records 1

Report Criteria

Accident: Number = "A103"
AND Project: Archived is False

Project Title: Sea King Hazard Log

Accident Data For A103

Accident Number: A103**Accident Title:** Severe occupational illness from asbestosis.**Accident Description:** Severe occupational illness from asbestosis.**Project Phase:** In service**Accident To:** First and Second Parties**Review Date:** 31/12/2018**Originator:** [REDACTED]**Owner:** Ministry of Defence**Notes:** Probability of accident will be less than hazard as prolonged exposure is required to harm personnel.

Asbestos Elimination programme in progress ([REDACTED]). Warnings in relevant publications provide mitigation in interim.

SKCSP2 12 Aug 08 - Following LOD Holder (SKMM) review, Control created using the latest information contained within the Jun 08 Sea King Typed Airworthiness Report. Entry set to Managed.

SKCSP2 24 Feb 09 - Entry reviewed by SKMM during the 9th LOD Holder Hazard Log Review Meeting. LOD Holder confirmed that the entry is ALARPt / Immediate I.e. now, however once all Asbestos parts have been replaced through the WOTSAC programme (detailed at C676), this entry can be considered ALARP.

SKPT Safety1 22 Aug 11 - This entry was reviewed by SQEP personnel in Q1/Q2 2011 during the SKPT's Accident Sequence Analysis activity (R517-19) refers (and was classed as a Critical Accident). In accordance with the SKPT's Safety & Environmental Management Plan (SEMP) Issue 7 ALARP strategy, all risks (accidents) and their associated hazards where the resultant derived accident probability (blue figure) is less than E-09 are considered broadly acceptable and therefore classed as D22 and ALARP by the SKPT. For the actual derived accident probabilities, refer to the associated Accident Sequence spreadsheet (R518). In this instance even when taking into account the associated Hazard (All causes) and the common cause probabilities (pink and blue figures respectively), the derived accident probabilities remain within this broadly acceptable (D22) / ALARP range.

SKPT Safety1 05 Sep 11 - This entry was reviewed by SQEP personnel on 31 Aug 11 during the SKPT's Accident Sequence Follow up Analysis activity (R522). This entry was reviewed because the sensitivity probability (green figure) within the associated accident sequence spreadsheet is not classified as ALARP however, for this entry it was agreed with a high confidence level that all associated incidents would be reported and that the actual number of reported incidents would be included/reflected within the common cause probability (blue figure) which is less than E-09 for Catastrophic entries or within the broadly acceptable (D22) range for Critical entries. In both cases regardless of Accident severity, the entry is considered broadly acceptable and ALARP by the SKPT law the SEMP and ALARP Strategy.

	Initial	Post
Probability:	Improbable	Incredible
Severity:	Critical	Critical
Risk Class:	C15	D22
Status:	ALARP	

Linked Hazard Data

SK/H102

Hazard Number: SK/H102

Hazard Title: Presence of asbestos constitutes Health & Safety Hazard.

Hazard Description: Exposure of aircrew and/or maintenance personnel to asbestos.

Project Phase: In service

Originator: [REDACTED]

Owner: Ministry of Defence

Use : Operation

System : 00. Multiple Systems

Location:

Hazard Type: Inherent

	Initial	Post
Probability:	Occasional	Occasional

Status: Closed

Notes: Asbestos Elimination Programme is in progress. Warnings in relevant publications provide mitigation in interim.
Refer to Accident Notes.

Linked Reference Data

SK/R77

Reference Number : SK/R77
Title : TAR report Jun 04.
Reference Type : Requirements
Serial Number: 148
Hyperlink : TAR May 04#\YEW1\rootfs\██████████\Group\EUNDESSeaKing_-REC Deliver\InSvcSp\Safety\Type Airworthiness Report\TAR May 04.doc#
Originator Ref. :
Originator :

SK/R304

Reference Number : SK/R304
Title : 5th Hazard Log Entry review meeting with LOD Holder SKMM held at the Sea King IPT on the 12 Aug 08. Hyperlinked Loose Minute detailing decisions agreed during review meeting signed by LOD Holder and subsequently filed.
Reference Type : Source Data References
Serial Number: 0
Hyperlink : \\YEW1\rootfs\██████████\Group\EUNDESSeaKing_-REC Deliver\InSvcSp\Safety\Aircraft and Safety Mgmt\Meetings\HRM\20080813-LM 5th LOD Holder (SKMM) Review Meeting - 12 Aug 2008-U.doc
Originator Ref. : ES(AIR)(VL)/16/08/01/10/05
Originator : SKCSP2

SK/R312

Reference Number : SK/R312
Title : Sea King Typed Airworthiness Report (TAR) dated June 2008.
Reference Type : Source Data References
Serial Number: 0
Hyperlink : 20080709-TAR June 08-R.doc#\YEW1\rootfs\██████████\Group\EUNDESSeaKing_-REC Deliver\InSvcSp\Safety\Type Airworthiness Report\20080709-TAR June 08-R.doc#
Originator Ref. : DLO/SKIPT/16/8/1/24/1
Originator : SKCSP2

SK/R354

Reference Number : SK/R354
Title : 9th Hazard Log Entry review meeting with LOD Holder SKMM held at the Sea King IPT on the 23 Feb 09. Hyperlinked Loose Minute detailing decisions agreed during review meeting signed by LOD Holder and subsequently filed.
Reference Type : Source Data References
Serial Number: 0
Hyperlink : 20090224-LM 9th LOD Holder (SKMM) Review Meeting - 23 Feb 2009-U.doc#\YEW1\rootfs\██████████\Group\EUNDESSeaKing_-REC Deliver\InSvcSp\Safety\Aircraft and Safety Mgmt\Meetings\HRM\20090224-LM 9th LOD Holder (SKMM)
Originator Ref. : ES(AIR)(VL)/16/08/01/10/05
Originator : SKCSP2

Status History Data

Status	Change Date	Approving Officer	Risk Class	Justification
Draft	23/11/2004	[REDACTED]		Created through import from Cassandra Import Facility
Open	12/05/2006	SKCSP2		Status set to Open.
Managed	12/08/2008	SKCSP2		Accident was set to Managed on the 12 Aug 08.
Managed	13/08/2008	SKCSP2		
Managed	13/08/2008	SKCSP2		PCS set following the creation of the linked control.
Managed	22/08/2011	[REDACTED]	C15	
Managed	22/08/2011	[REDACTED]	C15	
Managed	22/08/2011	[REDACTED]	C15	
Managed	22/08/2011	[REDACTED]	D22	Accident achieved a Post Control Status of Incredible / Critical (D22) following the SKPTs Accident Sequence Analysis activity in Q1/Q2 2011 (R518-19 refers).
ALARP	22/08/2011	[REDACTED]	D22	The Accident was set to ALARP on 22 Aug 11 following the SKPTs Accident Sequence Analysis activity in Q1/Q2 2011 (R518-19 refers) where the derived risk (Accident) probabilities (blue and pink figures) were found to be less than E-09.
ALARP	22/08/2011	[REDACTED]	D22	
ALARP	05/09/2011	[REDACTED]	D22	
ALARP	06/09/2011	[REDACTED]	D22	
Managed	31/07/2016	SYSTEM		This Accident History record was automatically created due to the ALARP status becoming expired.
ALARP	07/12/2016	[REDACTED]	D22	Entry status changed back to ALARP to reflect previous SQEP assessment.
Managed	08/12/2016	SYSTEM		This Accident History record was automatically created due to the ALARP status becoming expired.
ALARP	08/12/2016	SYSTEM		This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	19/04/2017	[REDACTED]	D22	Accident Status reverted back to Managed due to an unknown reason therefore Accident status changed back to ALARP as previously agreed by an appropriate LoAA Holder following Accident Sequence Analysis.
Managed	20/04/2017	SYSTEM		This Accident History record was automatically created due to the ALARP status becoming expired.
ALARP	20/04/2017	SYSTEM		This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	26/04/2017	[REDACTED]	D22	Accident Status reverted back to Managed due lapsed review date therefore review date updated and Accident status changed back to ALARP as previously agreed by an appropriate LoAA Holder following Accident Sequence Analysis. All entries refreshed annually; last reviewed/refreshed in Jan 17.
ALARP	27/04/2017	SYSTEM		This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	28/04/2017	SYSTEM		This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	29/04/2017	SYSTEM		This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	30/04/2017	SYSTEM		This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	01/05/2017	SYSTEM		This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).

ALARP	26/10/2017	SYSTEM	This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	27/10/2017	SYSTEM	This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	28/10/2017	SYSTEM	This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	29/10/2017	SYSTEM	This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	30/10/2017	SYSTEM	This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	31/10/2017	SYSTEM	This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	01/11/2017	SYSTEM	This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).
ALARP	02/11/2017	SYSTEM	This Accident History record was automatically created due to the ALARP status being reset to AlarpOkay (No Active Controls).

MAINTENANCE POLICY LEAFLET 115 ASBESTOS ELIMINATION

REFERENCES

- A. Control of Asbestos Regulations 2006 further amplified the 1999 Regulations.
- B. MoD Asbestos Elimination Programme details the requirement to identify and eliminate asbestos.
- C. JSP375 Leaflet 05.

APPLICABILITY

Sea King All Marks.

INTRODUCTION

- (1) The health concerns linked to exposure to asbestos has led to the introduction of numerous regulations to which the MoD must adhere. The MoD is committed to identifying the current uses of asbestos and progressing its elimination in accordance with the References.

AIM

- (2) The aim of this leaflet is to bring to the attention of all engineering personnel involved in the maintenance of Sea King aircraft, the potential existence of Asbestos Containing Material (ACM) within the structure, the location of the components and the steps being taken to eliminate or reduce the risk.

ACTION

ASBESTOS EVALUATION

- (3) The Sea King is a legacy platform which was introduced before the changes to asbestos regulations, consequently the original design included a number of ACM components.
- (4) The Sea King Project Team, in conjunction with the engine and aircraft Design Organisations introduced a series of modifications in 2005 / 2006 respectively to replace components manufactured from ACM. These modifications were classified as C3 WOTSAC (When Old Type Spares Are Consumed) modifications. The WOTSAC rider meant that all pre-mod stock was to be used before post-mod stock was issued. Logistic supply chain interrogation has identified that as recently as 2018, ACM components were still available therefore it is not possible to positively prove ACM components have been successfully eradicated from the platform.
- (5) Leonardo Helicopters Ltd and the Merlin Delivery Team (MDT) have carried out a detailed investigation utilising all available data including historical drawings and documentation in an attempt to identify all possible use of ACM on the Sea King helicopter.

ASBESTOS ELIMINATION

- (6) In July 2018 the MDT (Sea King Type Airworthiness Authority (TAA)) took immediate action to contain and manage any risk to personnel employed to maintain the remaining fleet of Sea King aircraft, including the issue of urgent SI(T)s. The overall management and elimination of ACM for Sea King aircraft will be carried out using the following measures:
- (a) With reference to the Annex A & B risk categories, remove asbestos components from the aircraft under the following hierarchy:
 - (i) The immediate removal of RED items through SI(T).
 - (ii) The active review and removal of AMBER components at suitable maintenance opportunities.
 - (iii) The passive replacement of GREEN components during routine replacements (e.g. through life expiry, unserviceability or access availability brought about by component removal).
 - (b) Cease the purchase of spares or new equipment containing asbestos.
 - (c) The quarantine and disposal of all packed stock, which is confirmed as containing asbestos.
- (7) Where potential ACM components are to be left in-situ this will only be allowed subject to one or more of the following conditions:
- (a) The component presents no hazard to maintenance personnel due to the asbestos component being housed within a higher assembly which is not disassembled other than by the Original Equipment Manufacturer (OEM) or specialist organisation.
 - (b) The risk of exposure to personnel in removing the asbestos component is greater than leaving the item in-situ.
- (8) Personnel working on the aircraft equipment detailed at Annex A & B are to, in conjunction with their local SHEF Team, carry out a risk assessment and follow the SME guidelines at Annex C.

Annexes:

- A. ECU components that may contain asbestos.
- B. Aircraft Components that May Contain Asbestos.
- C. Institute of Naval Medicine SME advice.

KEY FOR ANNEX A & B

Risk Cat	Definition
A: High	Visible fibres / loose fibres. Suspect asbestos item likely to be touched / disturbed / removed or replaced during maintenance / training activities.
B Medium	Fibres embedded in a matrix. Fitted, location obscure, unlikely to be touched or disturbed
C Low	No visible material. Not fitted, not visible, contained within higher assembly

Action	Definition
A	Alternative identified - Programme planned or on-going
B	Alternative identified - Replacement not practical
C	No suitable alternative identified
D	Not accessible by User Unit

SWB00135A-01

Key for Annex A

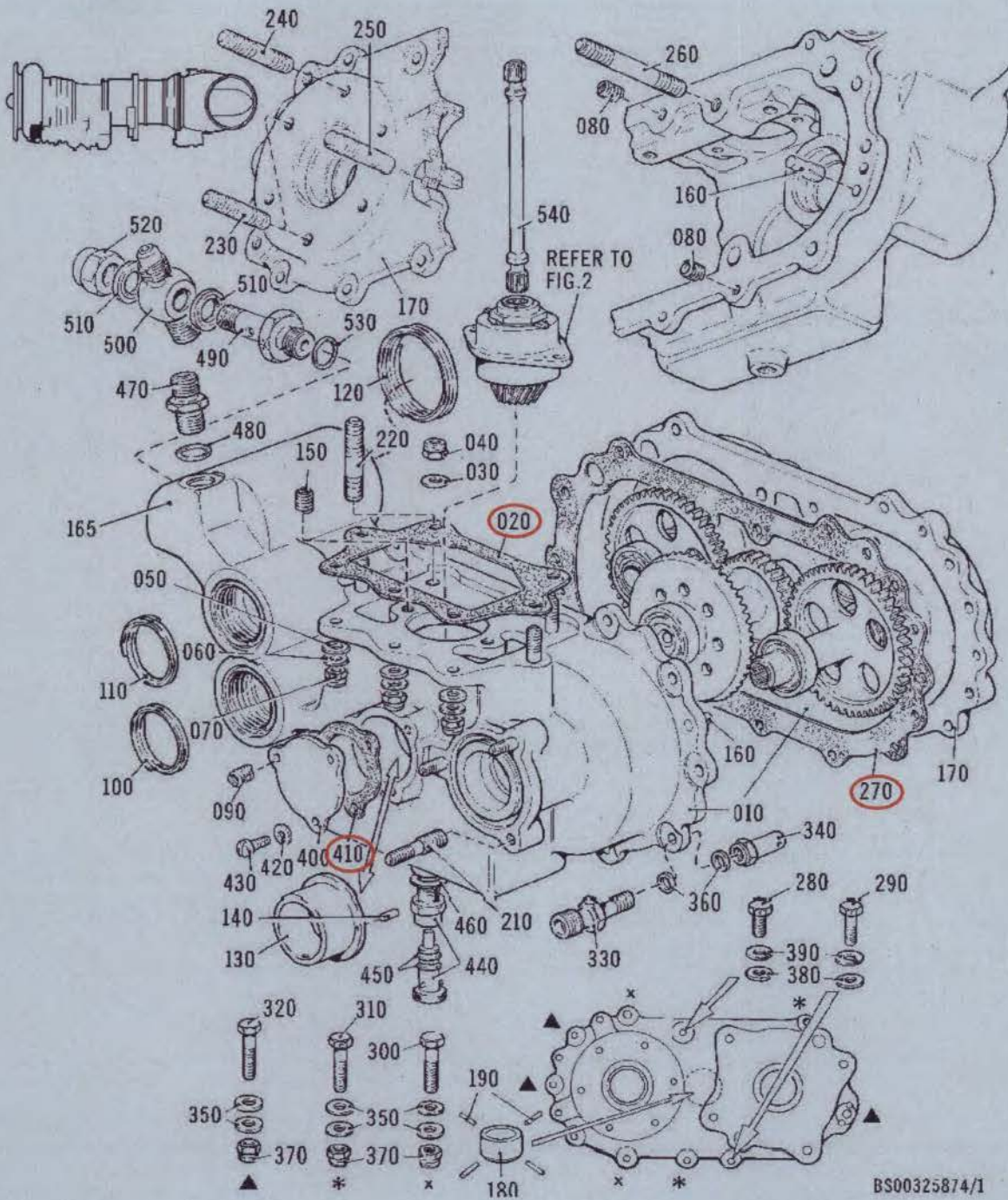
03--MPL115

Part No.	Description	Location	Reference		Risk Cat	Action
			App'x	Item		
2317	Gasket, Accessory Drive Casing	Accessory Drive Casing	A-1	20		
1457	Gasket, Cover	Accessory Drive Casing	A-1	270		
1459	Gasket, Cover Blanking	Accessory Drive Casing	A-1	410		
2622	Gasket, Adaptor to Oil Pump	Bevel Gearbox	A-2	630		
576801	Gasket, Drain Cover	Combustion Chamber	A-3	80		
N13220	Gasket, Adaptor	Front Frame and Accessory Drive	A-4	80		
570599	Gasket, Accessory Drive to Starter	Front Frame and Accessory Drive	A-4	320		
560396	Gasket, Flow Divider to Combustion Chamber	Flow Divider	A-5	210		
7999	Gasket, Flow Divider to Stiffening Bracket	Flow Divider	A-5	220		
2846	Gasket, Full Fuel Flow Filter to Pump	Fuel Pipes on Left Hand Side of Engine	A-6	20		
570520	Gasket, Fuel Pump Mounting Face	Fuel Pump and Flow Control Unit	A-7	20		
576857	Gasket, Ignitor And Blanking Plugs	Igniter Plug Blank	A-8	30		
1451	Gasket, Oil Filter	Oil Filter and Valves	A-9	60		
564267	Gasket, Oil Filter, By-Pass Valve	Oil Filter and Valves	A-9	150		
1452	Gasket, Oil Pressure Relief Valve	Oil Filter and Valves	A-9	240		
4046	Gasket, Oil Pump to Accessory Drive Casing	Oil Pump	A-10	20		
2622	Gasket, Adaptor to Oil Pump	Oil Pump	A-10	170		
6552	Gasket, Tachometer to Adaptor	Oil Pump	A-10	190		
2622	Gasket, OTG to Bevel Gearbox	Overspeed Trip Governor Unit	A-11	20		
AS4651	Gasket, Adaptor to Bevel Gearbox	Overspeed Trip Governor Trip Unit	A-11	20		
1712	Gasket, Pipe, Flange to Exhaust Case	Cooling Air Pipes (aft of Fireshield)	A-12	80		
1724	Gasket, Housing Front Bearing	Power Turbine Casing Shrouds and Baffle	A-13	50		
1714	Gasket, OTG Gearbox to Ex Casing	Power Turbine and Exhaust Assembly	A-14	220		
1712	Gasket, Pipe Air Cooling PTA Rear	Power Turbine and Exhaust Assembly	A-14	290		
1714	Gasket, Drive Pad Cover	Power Turbine and Exhaust Assembly	A-14	320		
567273	Gasket, Oil Jet Housing	Rear Frame	A-15	240		
AS4650	Gasket, Adaptor, Dual Tachometer	Dual Tachometer Generator Power Turbine Speed	A-16	20		

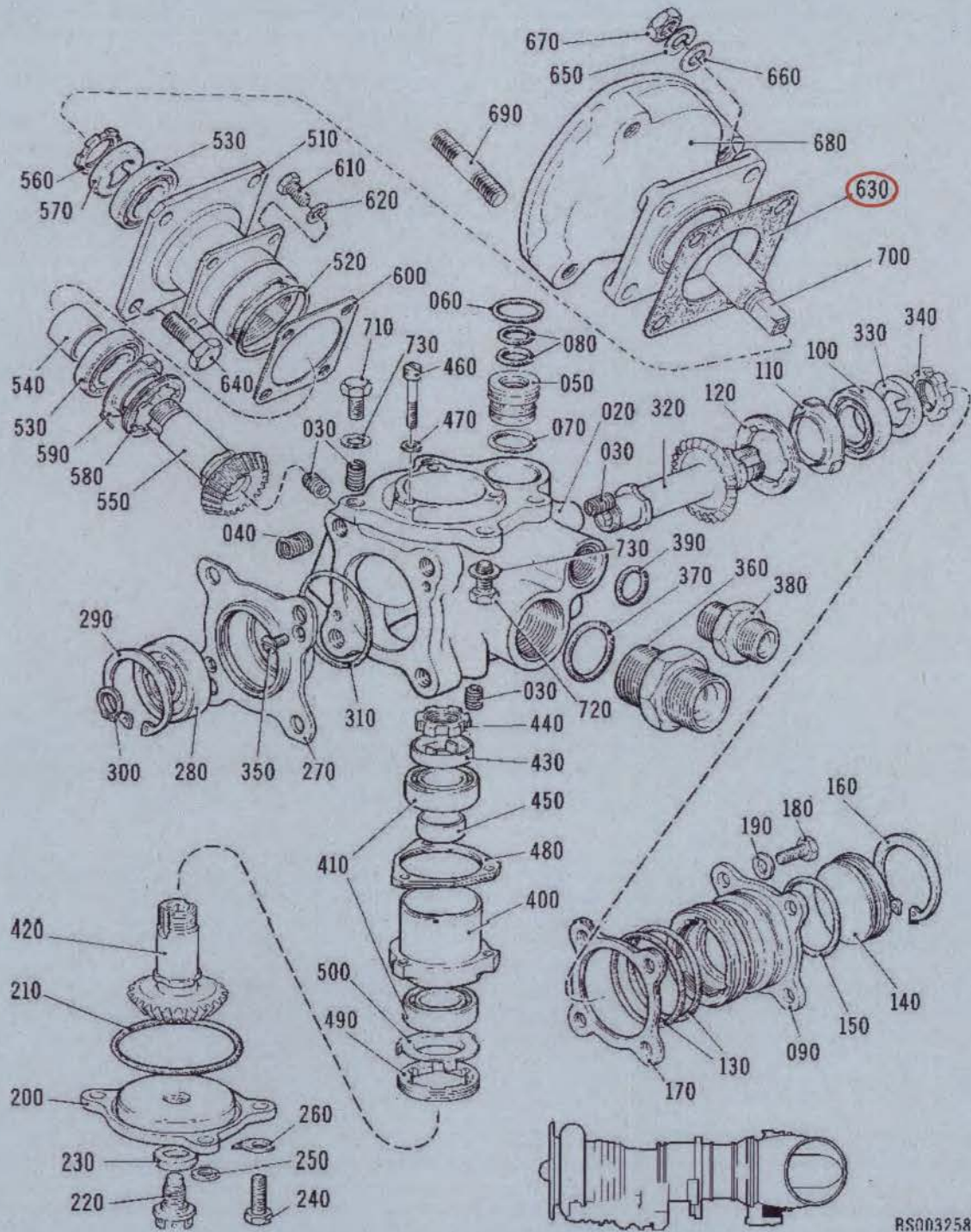
SWB00138A-02

Annex A to MPL115 - ECU Components that May Contain Asbestos

03--MPL115



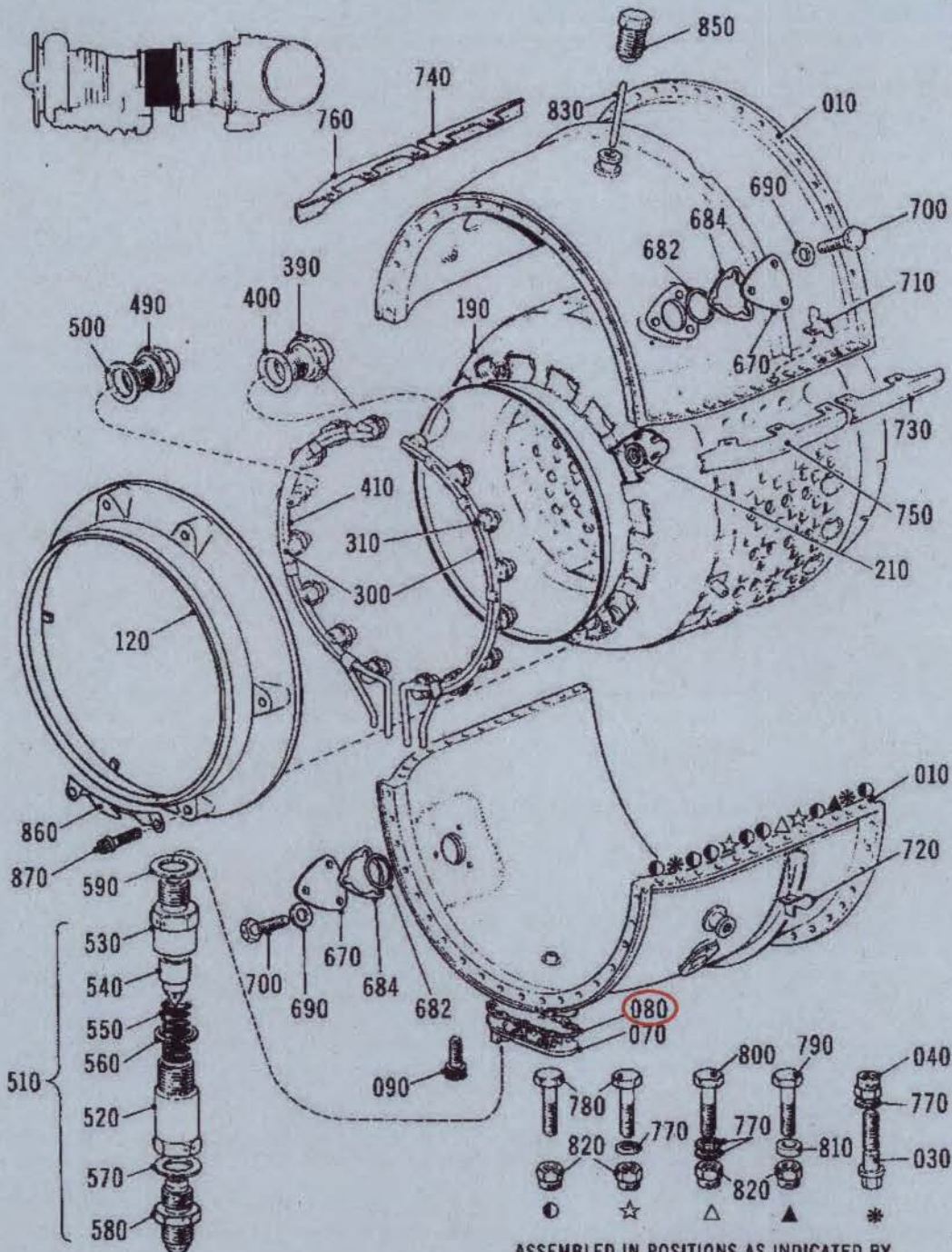
Appendix A-1 ECU Components that May Contain Asbestos - Accessory Drive Casing



RS00325871/1

SWB00138A-01

Appendix A-2 ECU Components that May Contain Asbestos - Bevel Gearbox



ASSEMBLED IN POSITIONS AS INDICATED BY SYMBOLS APPLICABLE TO LH AND RH FLANGES

BS00325862/1

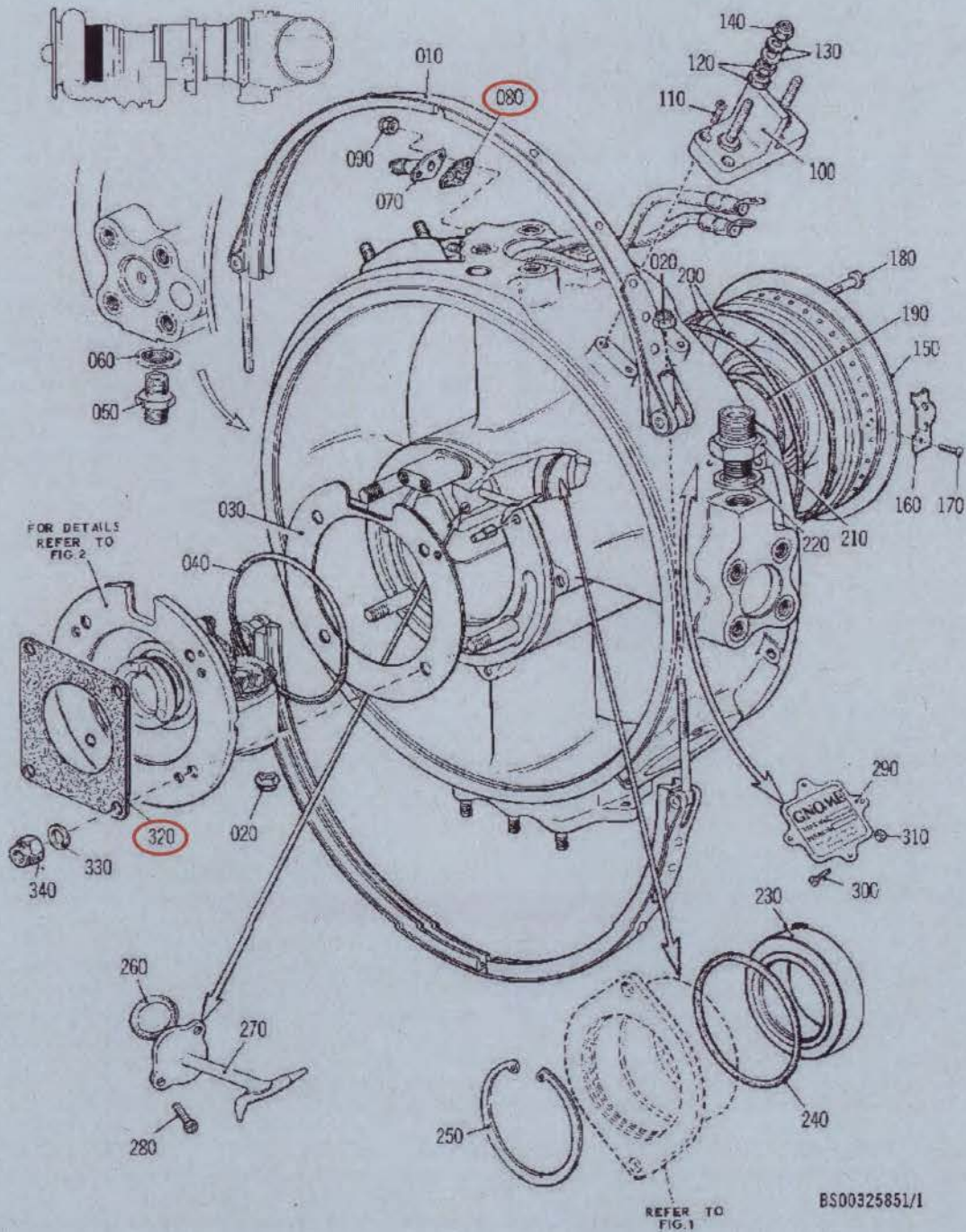
SVB00139A-01

Appendix A-3 ECU Components that May Contain Asbestos - Combustion Chamber

03--MPL115

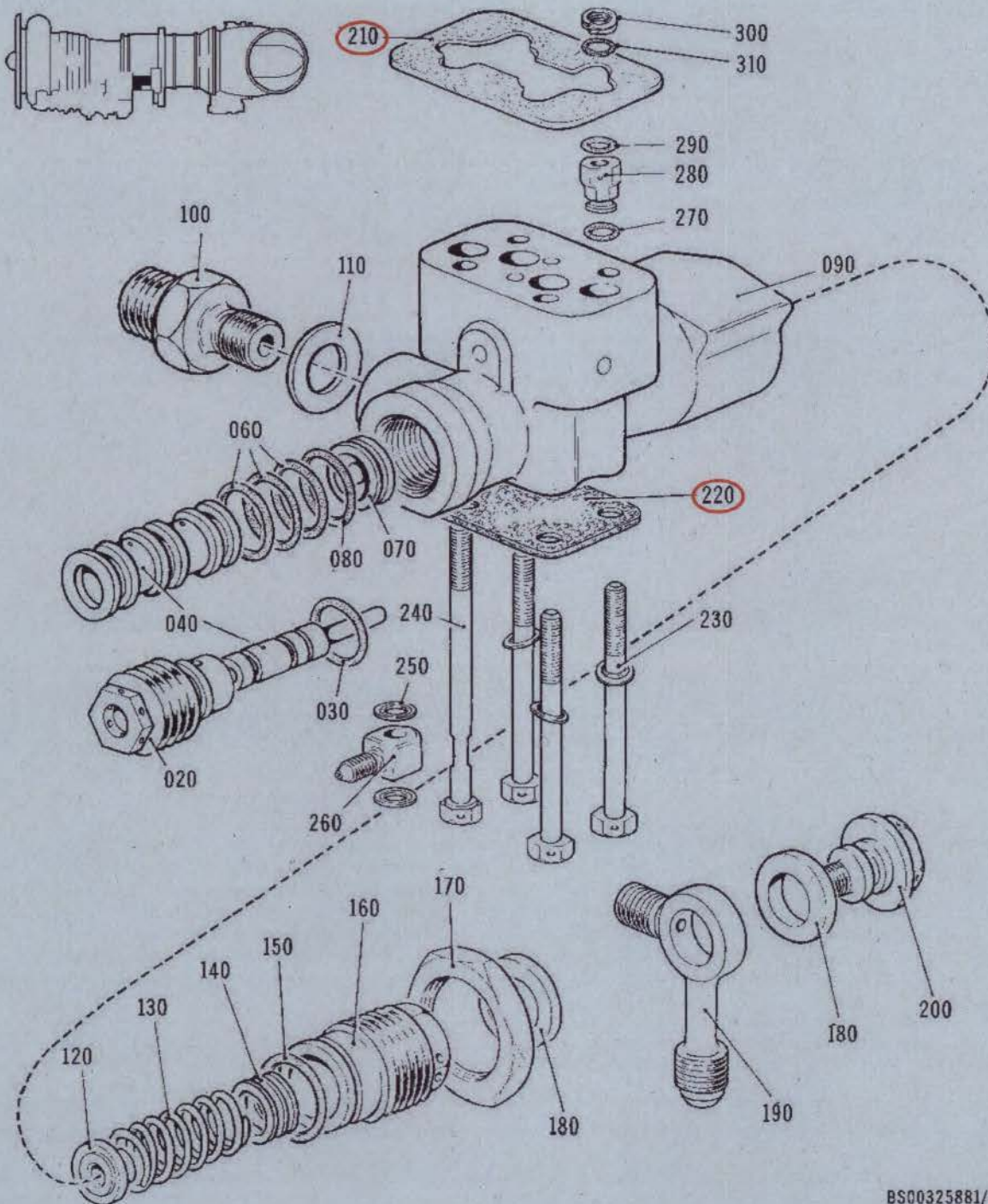
Page 7

AIL 01/18



Appendix A-4 ECU Components that May Contain Asbestos - Front Frame and Accessory Drive

03--MPL115



BS00325881/1

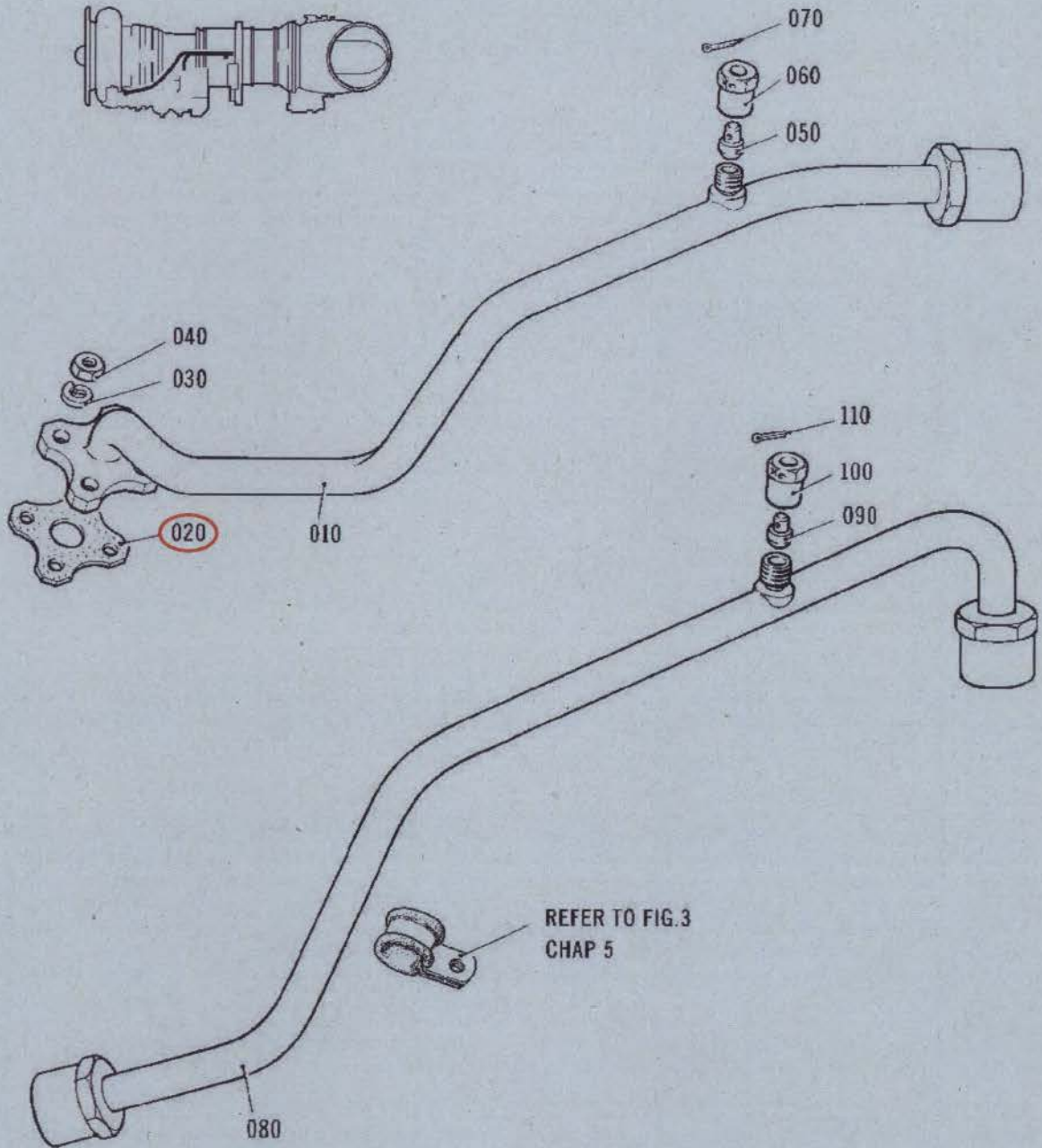
SWB00141A-01

Appendix A-5 ECU Components that May Contain Asbestos - Flow Divider

03--MPL115

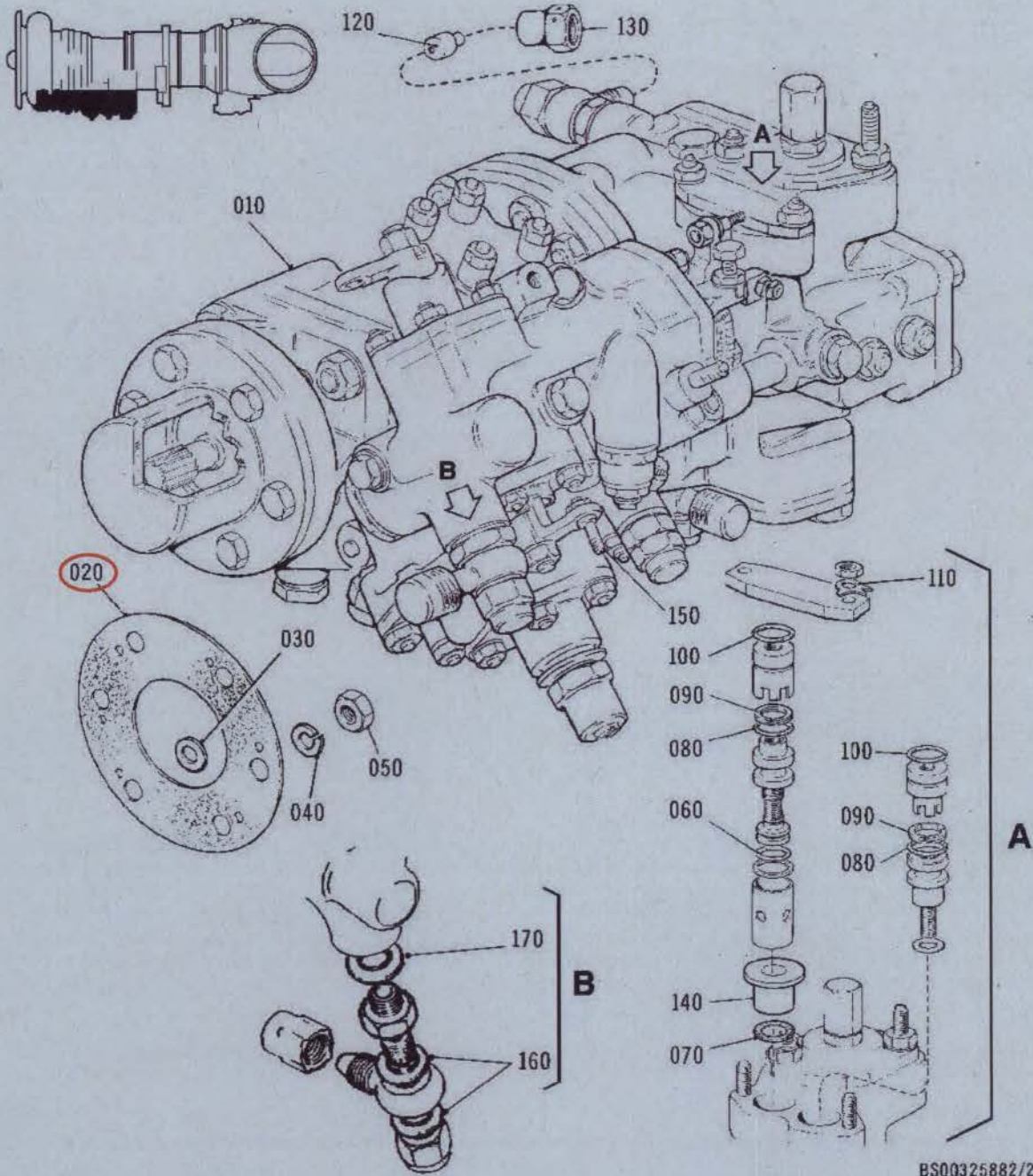
Page 9

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SWB00142A-01

Appendix A-6 ECU Components that May Contain Asbestos - Fuel Pipes on Left Hand Side of Engine

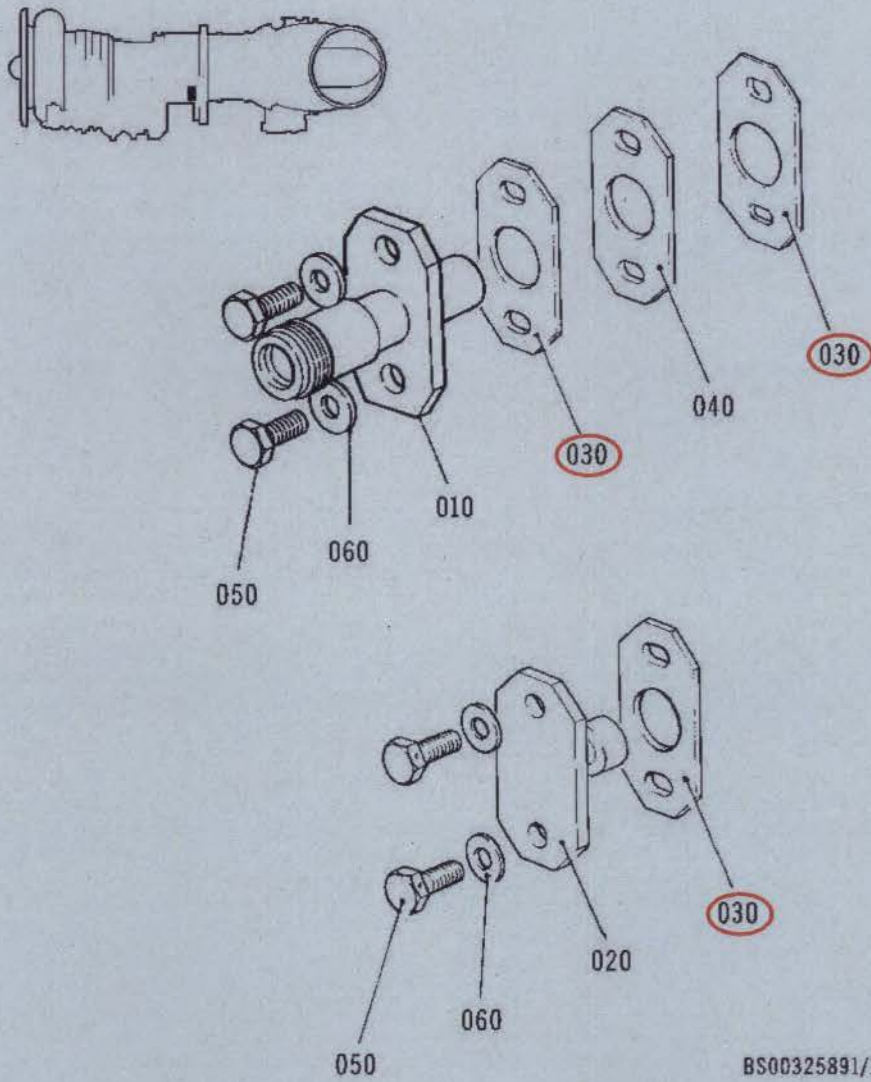


BS00325882/2

SWB00143A-01

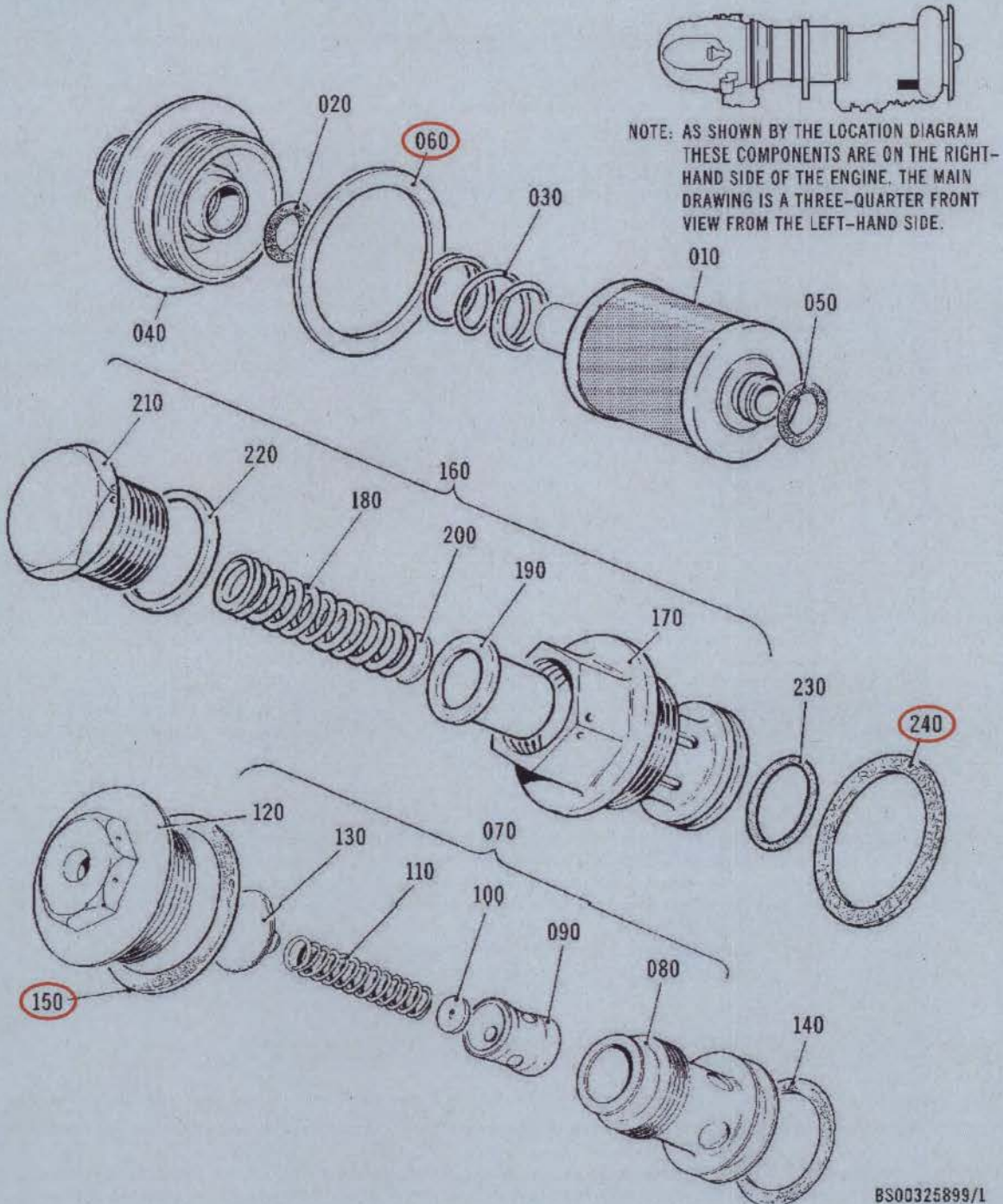
Appendix A-7 ECU Components that May Contain Asbestos - Fuel Pump and Flow Control Unit

03--MPL115



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Appendix A-8 ECU Components that May Contain Asbestos - Igniter Plug and Blank



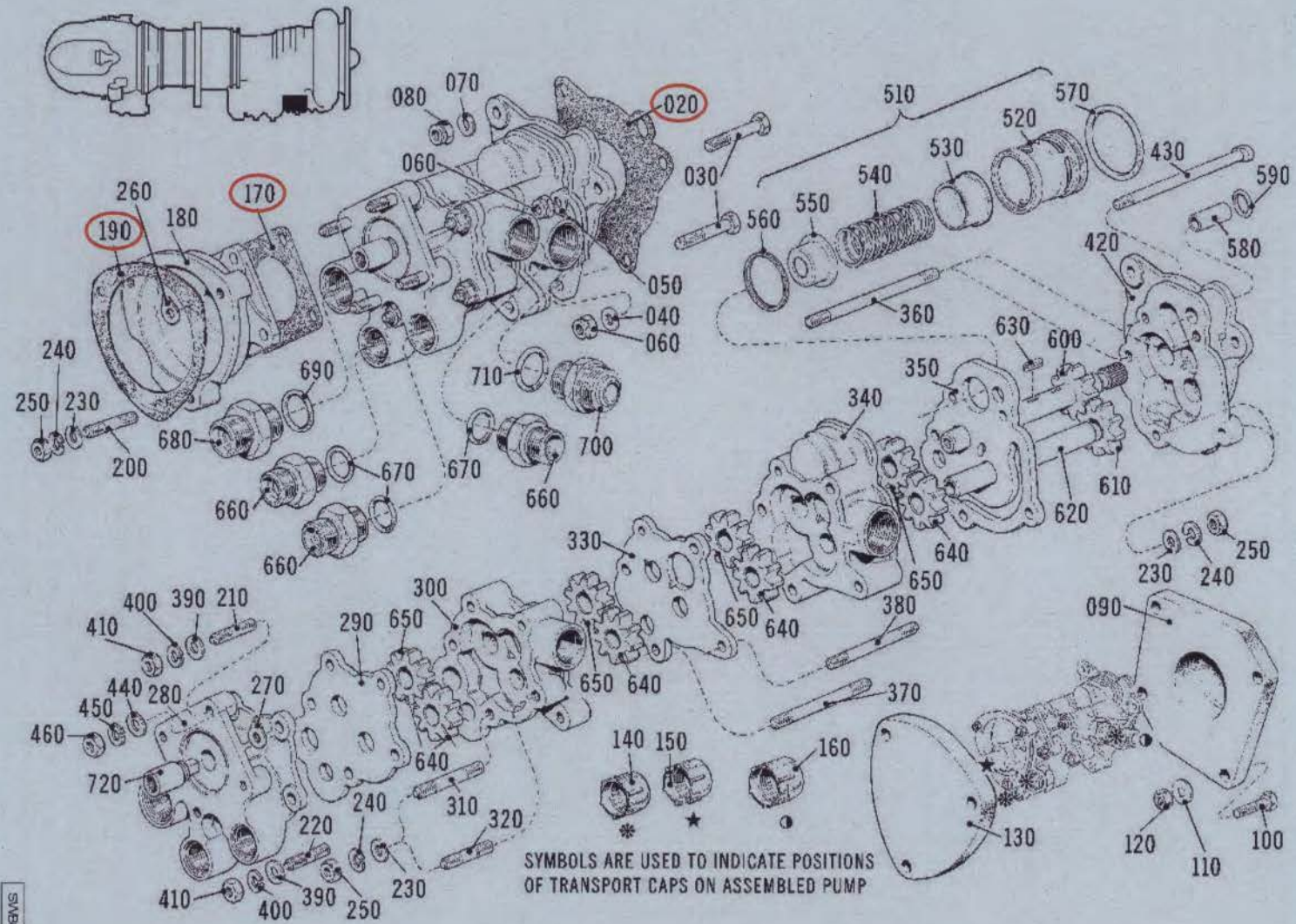
BS00325899/L

SWB00145A-01

Appendix A-9 ECU Components that May Contain Asbestos - Oil Filter and Valves

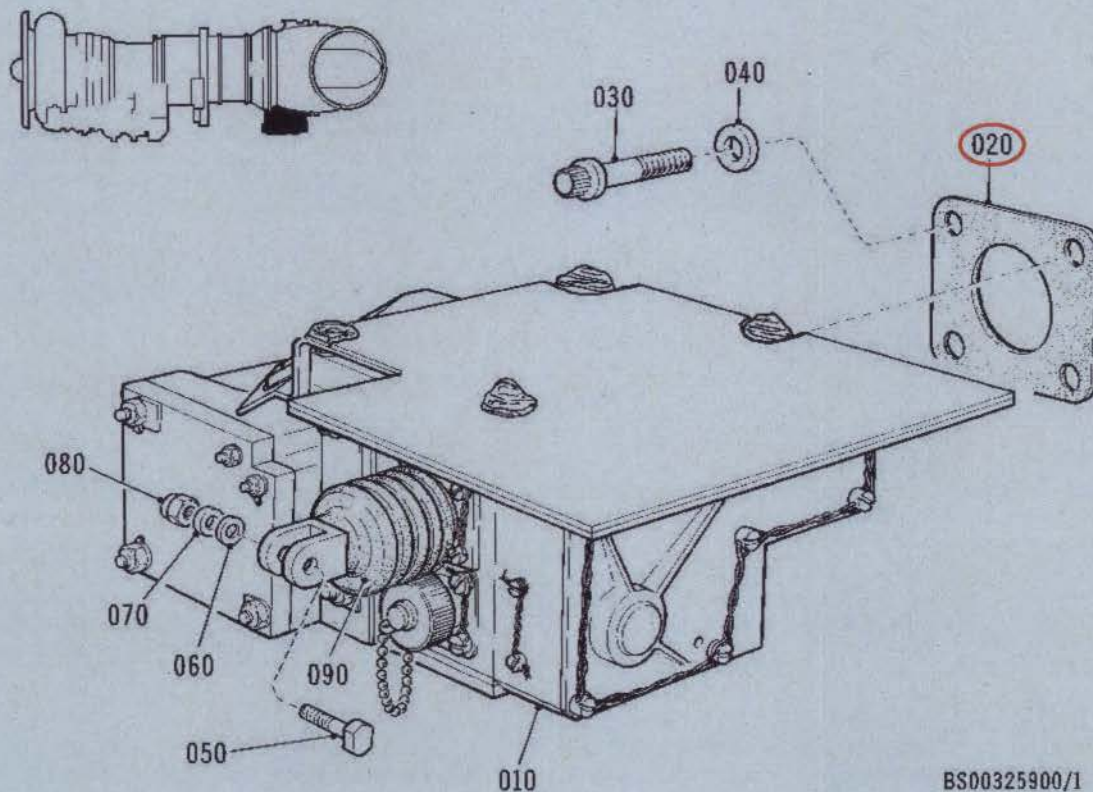
03--MPL115

Appendix A-10 ECU Components that May Contain Asbestos - Oil Pump



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BS00325895/1



BS00325900/1

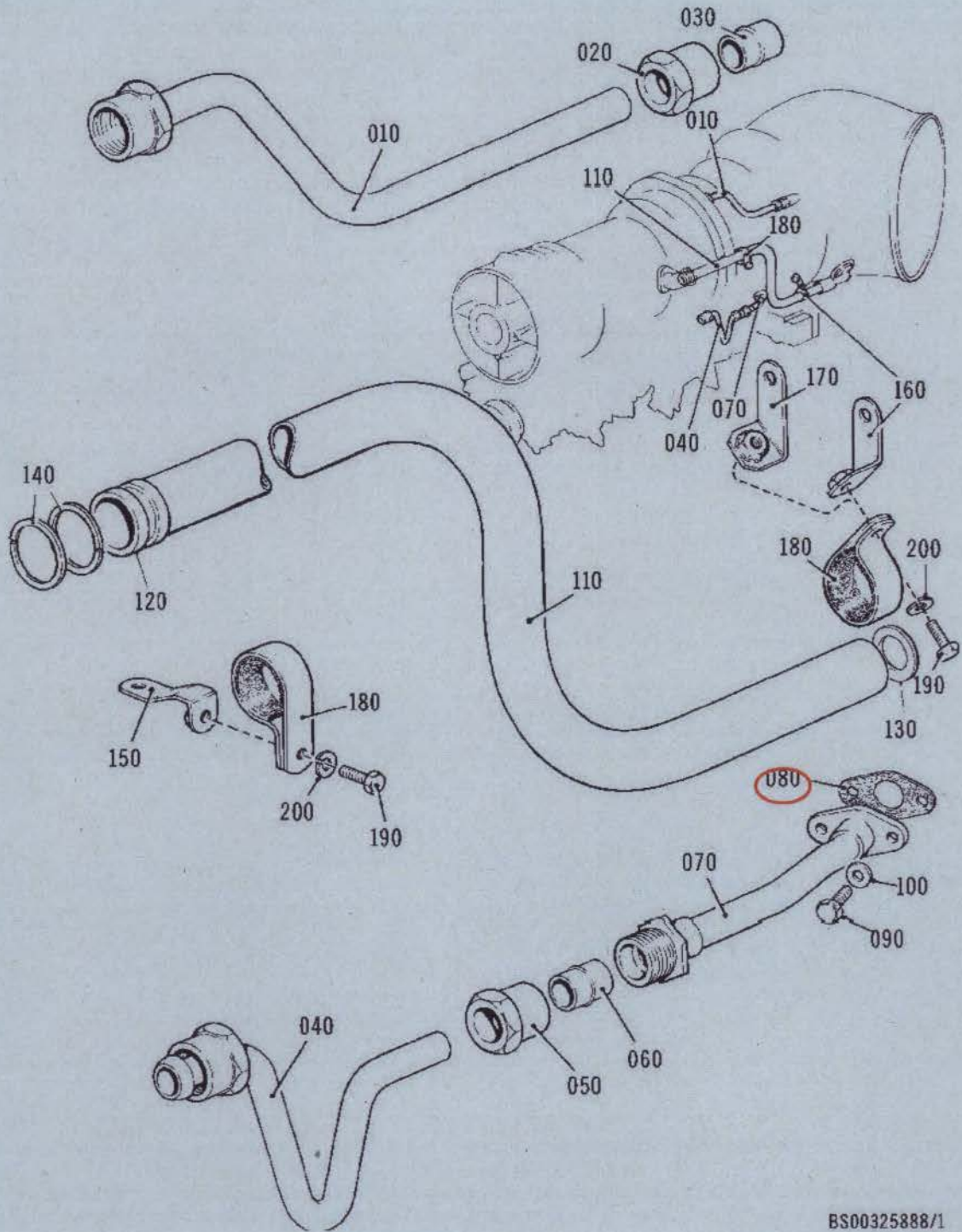
SWB00147A-01

Appendix A-11 ECU Components that May Contain Asbestos - Overspeed Trip Governor Unit

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BS00325888/1

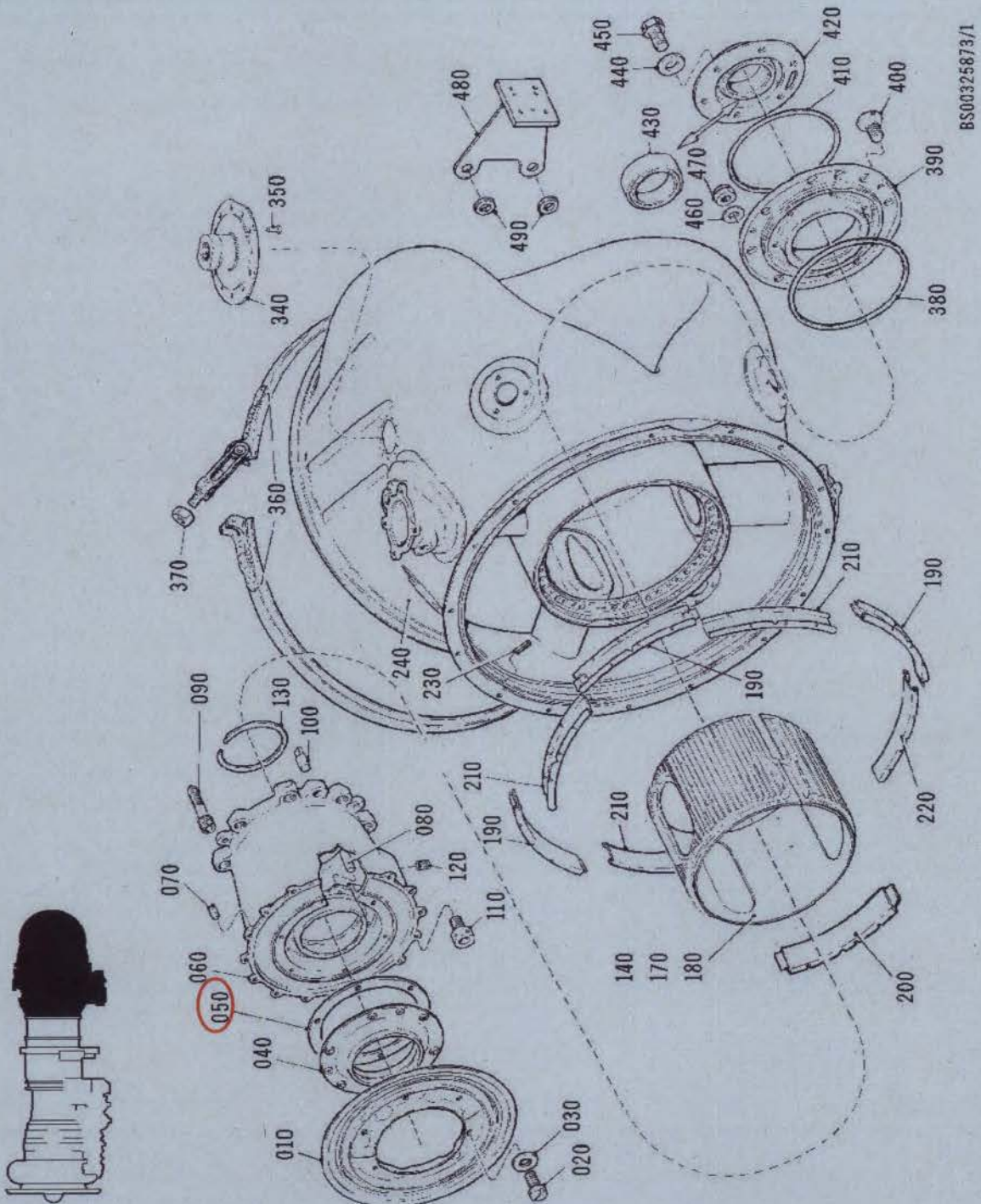
SVB00148A-01

Appendix A-12 ECU Components that May Contain Asbestos - Cooling Air Pipes (Aft of Fireshield)

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BS00325673/1

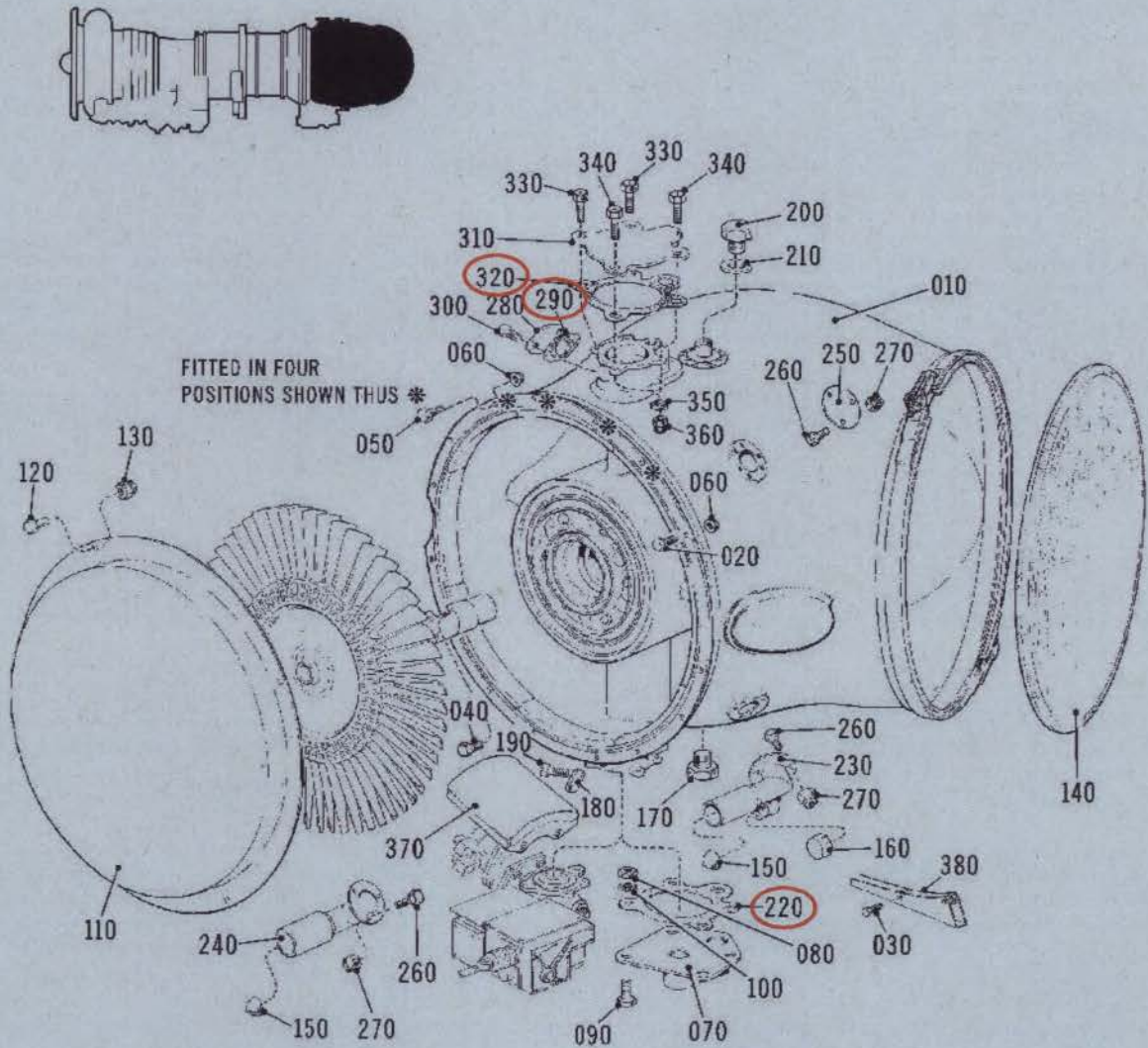
SWB00149A-01

Appendix A-13 ECU Components that May Contain Asbestos - Power-Turbine Casing Shrouds and Baffle

03--MPL115

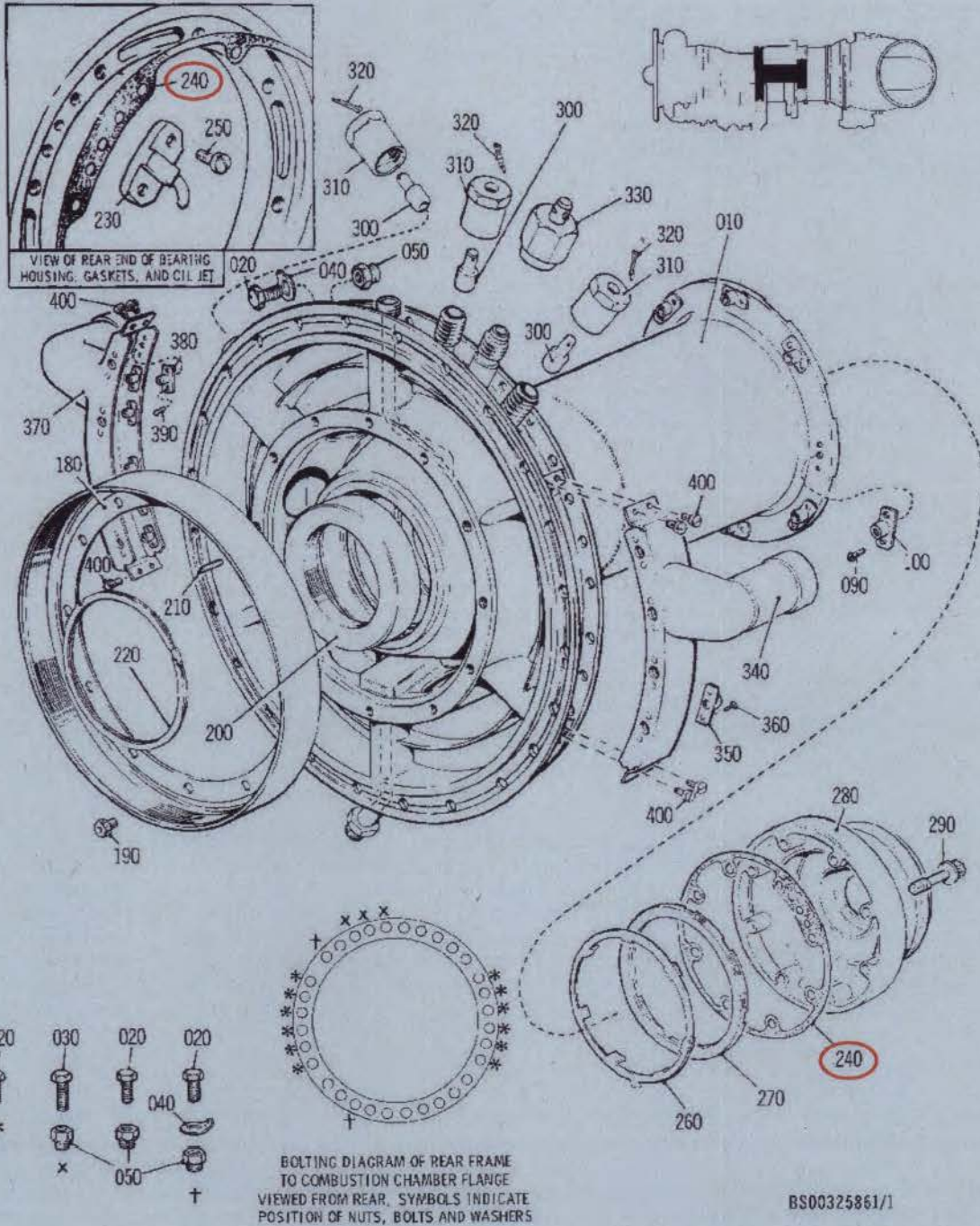
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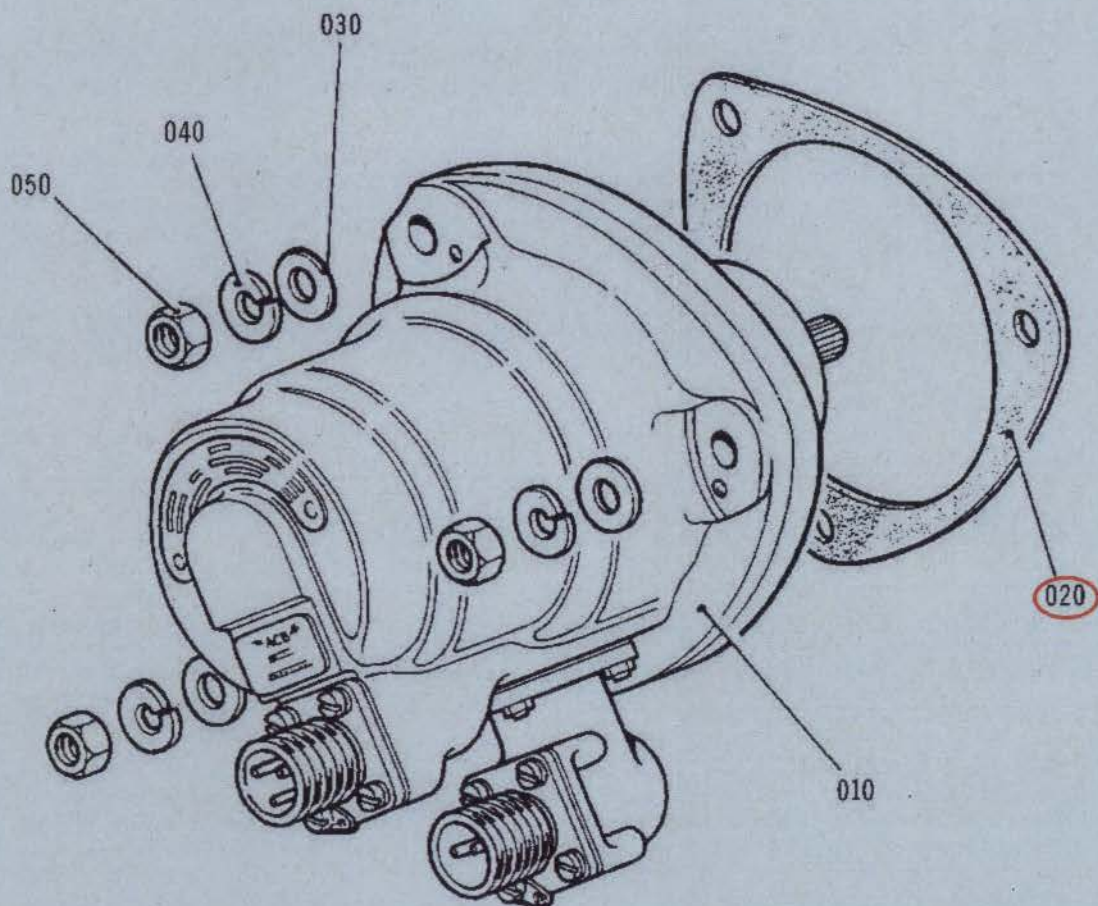
SWB00150A-01

Appendix A-14 ECU Components that May Contain Asbestos - Power Turbine and Exhaust Casing



Appendix A-15 ECU Components that May Contain Asbestos - Rear Frame

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SVB00152A-01

Appendix A-16 ECU Components that May Contain Asbestos - Dual Tachometer-Generator Power Turbine Speed

KEY FOR ANNEX A & B

Risk Cat	Definition
A: High	Visible fibres / loose fibres. Suspect asbestos item likely to be touched / disturbed / removed or replaced during maintenance / training activities.
B Medium	Fibres embedded in a matrix. Fitted, location obscure, unlikely to be touched or disturbed
C Low	No visible material. Not fitted, not visible, contained within higher assembly

Action	Definition
A	Alternative identified - Programme planned or on-going
B	Alternative identified - Replacement not practical
C	No suitable alternative identified
D	Not accessible by User Unit

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Key for Annex B

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Part Number	Description	Location	A/C Mk	Reference		Risk Cat	Action
				App'x	Item		
45514-1101	Oil Cooler and Fan Unit	Utility Hydraulic	3, 3a, 4, 5 & 7	B-1	21B		
45514-1102	Oil Cooler and Fan Unit	Utility Hydraulic	3, 3a, 4, 5 & 7	B-1	21C		
45514-1371	Oil Cooler and Fan Unit	Utility Hydraulic	6	B-1	21D		
92420	Oil Cooler	Utility Hydraulic	All	B-1	23D		
43474-1016	Oil Cooler	Utility Hydraulic	All	B-1	23E		
AN4044-1	Gasket	Utility Hydraulic	All	B-2	22		
AN4044-1	Gasket	Utility Hydraulic	All	B-3	47		
AN4044-1	Gasket	Utility Hydraulic	All	B-3	27B		
WD01-10-92800	Seal	Engine Cowling	3, 3a, 4, 5, 6 & 7	B-4	31		UTI/SK/0112
WD01-10-92800	Seal	Engine Cowling	3, 3a, 4, 5, 6 & 7	B-5	30		UTI/SK/0112
WD01-10-92801	Seal	Engine Cowling	3, 3a, 4, 5, 6 & 7	B-5	25		UTI/SK/0113
WD01-10-90680	Gasket	Engine Centre Firewall	3, 3a, 4, 5, 6 & 7	B-6	12		
WD01-10-90679	Gasket	Engine Centre Firewall	3, 3a, 4, 5, 6 & 7	B-6	13		
WD01-10-92821	Seal	Power Unit Engine Bay	3, 3a, 4, 5, 6 & 7	B-7	10		UTI/SK/0113
WD01-10-92822	Seal	Power Unit Engine Bay	3, 3a, 4, 5, 6 & 7	B-7	12		UTI/SK/0113
WD01-10-92823	Seal	Power Unit Engine Bay	3, 3a, 4, 5, 6 & 7	B-7	14		UTI/SK/0113
WD01-10-92824	Seal	Power Unit Engine Bay	3, 3a, 4, 5, 6 & 7	B-7	16		UTI/SK/0113
WD01-10-92892	Seal	Power Unit Engine Bay	3, 3a, 4, 5, 6 & 7	B-7	22		UTI/SK/0113
WD01-10-92893	Seal	Power Unit Engine Bay	3, 3a, 4, 5, 6 & 7	B-7	24		UTI/SK/0113
WD01-10-92905	Seal	Power Unit Engine Bay	3, 3a, 4, 5, 6 & 7	B-7	30		UTI/SK/0113
WD01-10-92906	Seal	Power Unit Engine Bay	3, 3a, 4, 5, 6 & 7	B-7	32		UTI/SK/0113
WD01-10-92904	Seal	Power Unit Engine Bay	3, 3a, 4, 5, 6 & 7	B-7	40		UTI/SK/0113
WD01-10-92903	Seal	Power Unit Engine Bay	3, 3a, 4, 5, 6 & 7	B-7	38		UTI/SK/0113
WD01-81-23151	Fairlead	Fairleads and Conduits Cabin	3, 3a, 4, 5, 6 & 7	B-8	30		
WD01-81-23075	Fairlead	Fairleads and Conduits Cabin	3, 3a, 4, 5, 6 & 7	B-8	48		
WD01-81-23115	Fairlead	Fairleads and Conduits Cabin	3, 3a, 4, 5, 6 & 7	B-9	40		
WD4174-00028-041	Insulating Muff	Cabin Heating	3, 3a & 4	B-10	2		
WD4174-00044-041	Insulating Muff	Cabin Heating	3, 3a & 4	B-10	3		
WD4174-00048-041	Insulating Muff	Cabin Heating	3, 3a & 4	B-10	4		
WD4174-00092-041	Insulating Muff	Cabin Heating	3, 3a & 4	B-10	5		
WD0174-90003	Connecting Sleeve	Heating / Ventilation	3, 3a & 4	B-10	9		
WD4174-00027-041	Pipe Assy	Cabin Heating	3, 3a & 4	B-10	11		
WD4174-00026	Pipe Assy	Cabin Heating	3, 3a & 4	B-10	13		
WD4174-00024-045	Pipe Assy	Cabin Heating	3, 3a & 4	B-10	14		
WD0174-90003	Connecting Sleeve	Heating / Ventilation	3, 3a & 4	B-10	17		
WD4174-00026	Pipe Assy	Cabin Heating	3, 3a & 4	B-10	20		
WD4174-00025	Pipe Assy	Cabin Heating	3, 3a & 4	B-10	31		
WD0174-90003	Connecting Sleeve	Heating / Ventilation	3, 3a & 4	B-10	33		
WD4174-00026	Pipe Assy	Cabin Heating	3, 3a & 4	B-10	36		
WD4174-00040	Pipe Assy	Cabin Heating	3, 3a & 4	B-10	47		

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Annex B to MPL115 (Sheet 1) - Aircraft Components that May Contain Asbestos

Part Number	Description	Location	A/C Mk	Reference		Risk Cat	Action
				App'x	Item		
WD01-74-90123	Gasket	Cabin Heating	3, 3a, 4, 5 & 6	B-10	51		
WD0174-90003	Connecting Sleeve	Heating / Ventilation	3, 3a, 4 & 6	B-10	55		
WD0174-90003	Connecting Sleeve	Heating / Ventilation	3, 3a, 4 & 6	B-10	60		
WD01-74-90119	Gasket	Cabin Heating	3, 3a, 4, 5 & 6	B-10	68		
565383	Gasket	Cabin Heating	3, 3a, 4, 5 & 6	B-10	79		
WD01-74-90119	Gasket	Cabin Heating	3, 3a, 4, 5 & 6	B-11	5		
BAS160-6-5-24-16	Connecting Sleeve	Heating / Ventilation	3, 3a, 4 & 6	B-11	9		
BAS160-6-5-24-16	Connecting Sleeve	Heating / Ventilation	3, 3a, 4 & 6	B-11	24		
565383	Gasket	Cabin Heating	3, 3a, 4, 5 & 6	B-11	37		
WD4174-00028-041	Insulating Muff	Cabin Heating	3, 3a & 4	B-12	9		
WD4174-00098-041	Insulating Muff	Cabin Heating		B-12	10		
WD4174-00028-041	Insulating Muff	Cabin Heating	3, 3a & 4	B-12	11		
WD4174-00006-041	Insulating Muff	Cabin Heating	3, 3a & 4	B-12	12		
WD0474-00005-041	Insulating Muff	Cabin Heating	Mk 4 only	B-12	13		
WD4174-00099-041	Insulating Muff	Cabin Heating		B-12	14		
WD0174-90003	Connecting Sleeve	Heating / Ventilation	3, 3a & 4	B-12	18		
WD4174-00027	Pipe Assy	Cabin Heating	3, 3a & 4	B-12	24		
MS9136-01 / AN4047-1	Gasket	MRGB Accessory Drive	3, 3a, 4, 5, 6 & 7	B-13	9		
MS9134-01 / AN4045-1	Gasket	MRGB Accessory Drive	3, 3a, 4, 5, 6 & 7	B-13	34		
WD0174-90003	Connecting Sleeve	Sonar Heating	3, 3a, 4, 5 & 6	B-14	6		
565383	Gasket	Sonar Heating	3, 3a, 4, 5 & 6	B-14	7		
WD01-74-90119	Gasket	Cabin Heating	3, 3a, 4, 5 & 6	B-14	17		
WD0174-90003	Connecting Sleeve	Sonar Heating	3, 3a, 4, 5 & 6	B-14	23		
WD0174-90003	Connecting Sleeve	Sonar Heating	3, 3a, 4, 5 & 6	B-14	30		
565383	Gasket	Sonar Heating	3, 3a, 4, 5 & 6	B-14	31		
WD01-74-90119	Gasket	Cabin Heating	3, 3a, 4, 5 & 6	B-14	42		
WD01-74-90123	Gasket	Cabin Heating	3, 3a, 4, 5 & 6	B-14	50		
WD01-74-90180	Pipe Assy	Sonar Heating	6	B-15	1		
WD0174-90003	Connecting Sleeve	Sonar Heating	3, 3a, 4, 5 & 6	B-15	13		
BAS160-6-2-32-12	Connecting Sleeve	Sonar Heating	6	B-15	29		
WD01-47-90079	Auto/ Manual Control Cable	Engine Bay		B-16	25		Mk 7 AERO
MS9134-01	Gasket	Hoist BL10300-59		B-17	156		
AN763-12	Gasket	Fuselage	5, 6	B-18	7		
AN763-12	Gasket	Fuel Cell Vent Lines	3, 3a, 4, 5, 6 & 7	B-19	57		
AN763-12	Gasket	Fuel Cell Vent Lines	3, 3a, 4, 5, 6 & 7	B-19	120		
AN763-12	Gasket	Fuel Cell Vent Lines	3, 3a, 4, 5, 6 & 7	B-19	187		
AN763-12	Gasket	Fuel Cell Vent Lines	3, 3a, 4, 5, 6 & 7	B-20	57		
AN763-12	Gasket	Fuel Cell Vent Lines	3, 3a, 4, 5, 6 & 7	B-20	111		
AN763-12	Gasket	Fuel Cell Vent Lines	3, 3a, 4, 5, 6 & 7	B-20	121		
AN763-24	Gasket	Fuel System Lower Fuselage	3, 3a, 4, 5, 6 & 7	B-21	29		

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Annex B to MPL115 (Sheet 2) - Aircraft Components that May Contain Asbestos

Part Number	Description	Location	A/C Mk	Reference		Risk Cat	Action
				App'x	Item		
AN763-24	Gasket	Fuel System Lower Fuselage	3, 3a, 4, 5, 6 & 7	B-21	31		
AN763-24	Gasket	Fuel System Lower Fuselage	3, 3a, 4, 5, 6 & 7	B-22	60		
AN763-24	Gasket	Fuel System Lower Fuselage	3, 3a, 4, 5, 6 & 7	B-22	62		
NDN3305/267	RPU Gasket	Autopilot	3, 3a, 4, 5, 6 & 7	B-23	6		
NDN3305/284	RPU Gasket	Autopilot	3, 3a, 4, 5, 6 & 7	B-23	6		
NDN8681-01	Controller AFCS	Autopilot	3, 3A	B-24	2		
NDN8140-01	Parrallel Actuator Pre Mod 490	Collective Pitch Control	3, 3A	B-25	41		
AA34024-14	AD3400 VHF-UHF Controller	Interseat Console	5, 6, 7	B-26	3		
UA6047-5	Distribution Box	Intercomm	5, 6	B-27	3		
	Gasket	Water Boiler	3, 3A	B28	9		
HE50844Z46	Gasket	Water Boiler	3, 3A	B28	18		
HE50844Z40	Nut Plain	Water Boiler	3, 3A	B28	35		
HE50844M11	Washer Flat	Water Boiler	3, 3A	B28	36		
HE50844Z38	Packing Preformed	Water Boiler	3, 3A	B28	39		
HE50844Z38	Packing Preformed	Water Boiler	3, 3A	B28	44		
HE50844Z84	Washer Flat	Water Boiler	3, 3A	B28	76		
HE50844Z51	Gasket	Water Boiler	3, 3A	B28	85		
HE50844Z33	Washer	Water Boiler	3, 3A	B28	87		

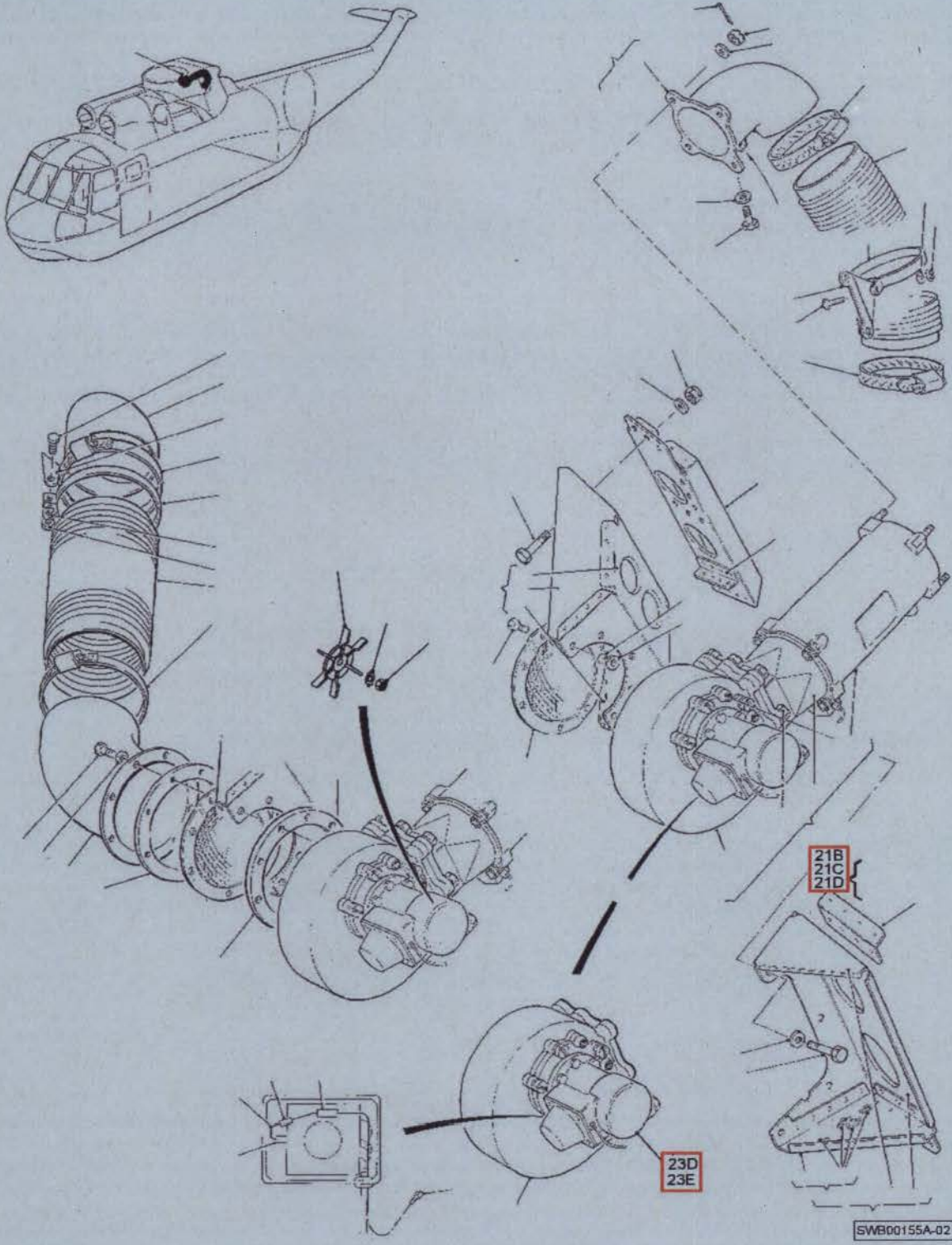
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Annex B to MPL115 (Sheet 3) - Aircraft Components that May Contain Asbestos

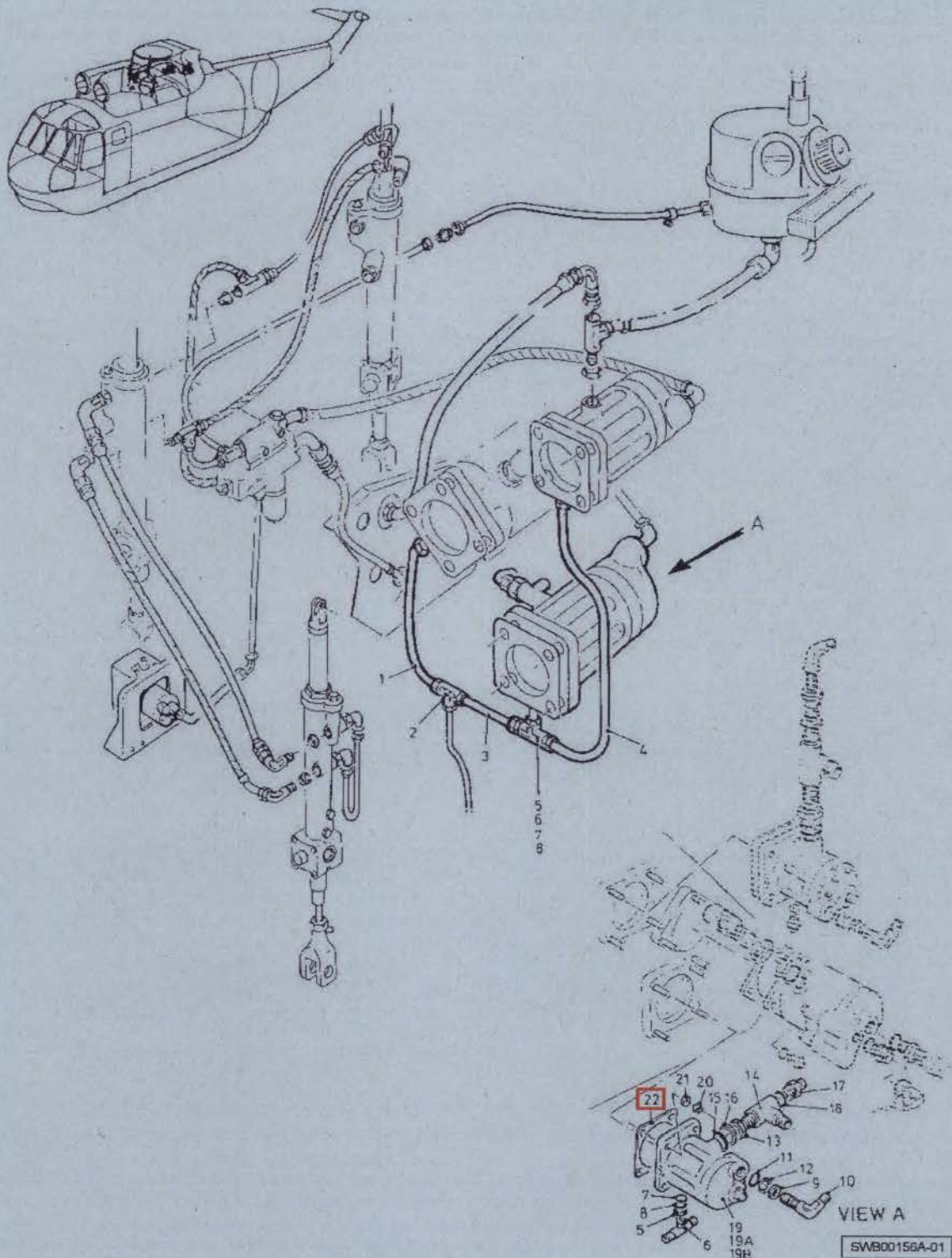
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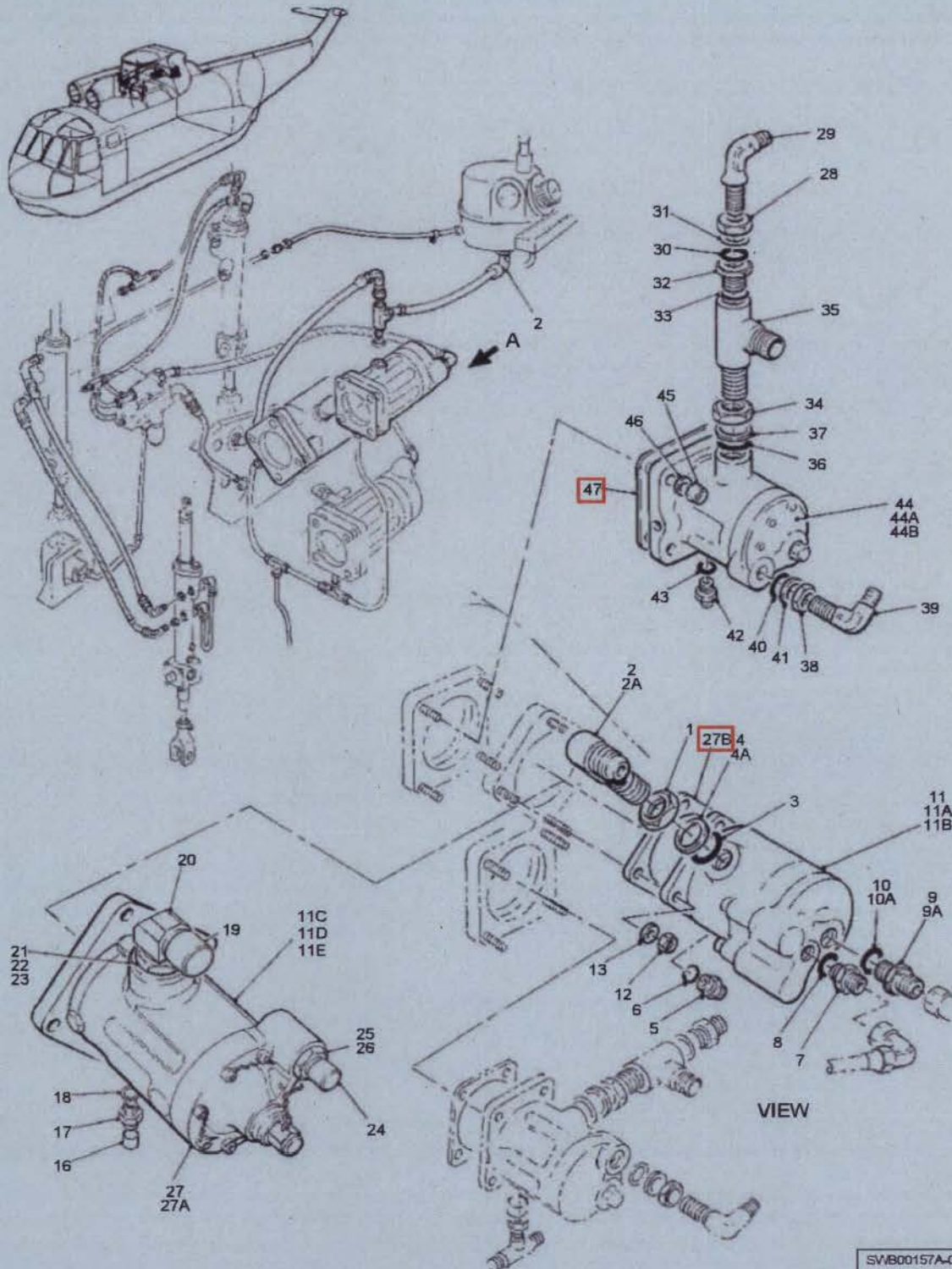
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Appendix B-1 Aircraft Components that May Contain Asbestos - Oil Cooler and Fan Unit

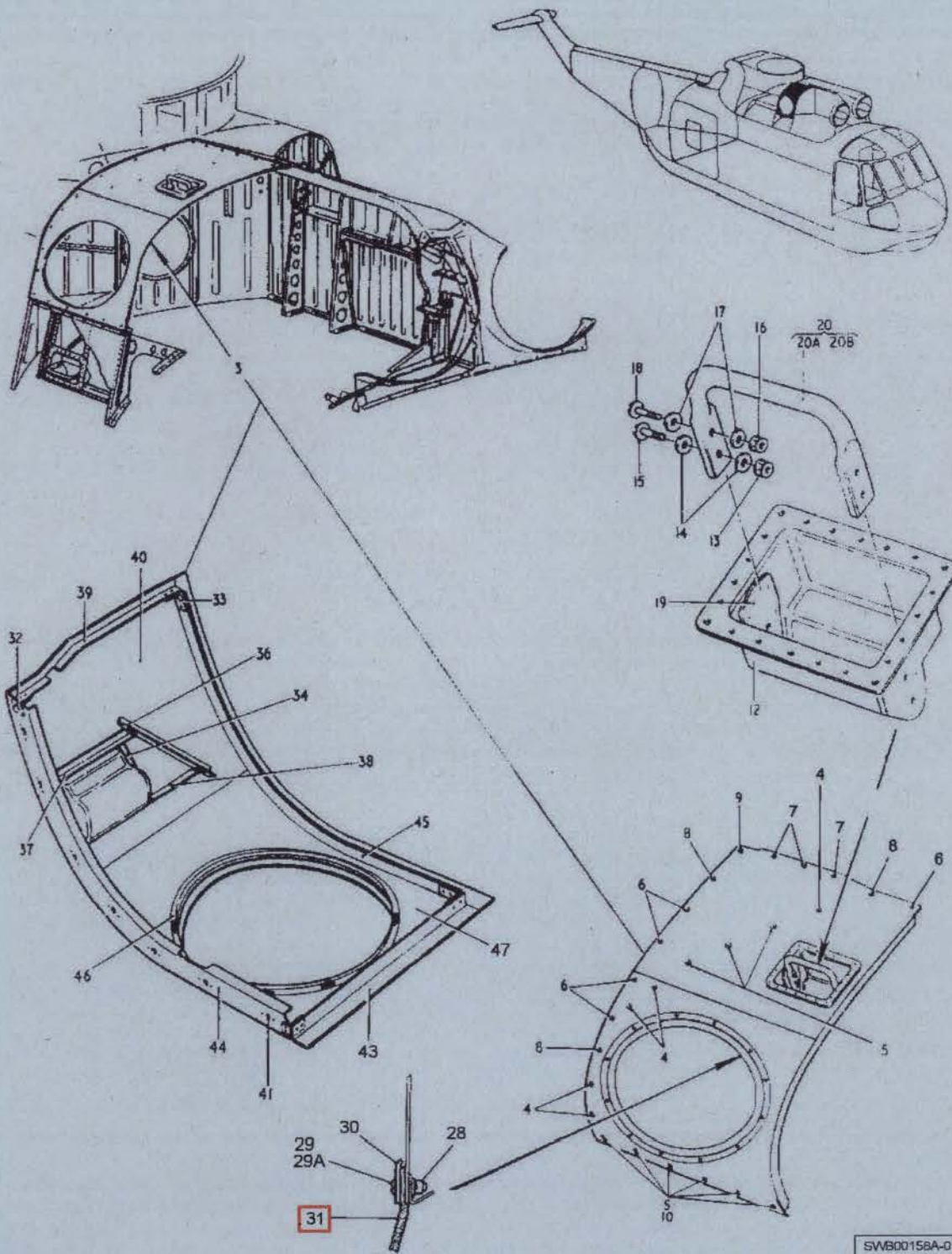


Appendix B-2 Aircraft Components that May Contain Asbestos - Main-Rotor Gear-Box Hydraulic Pumps

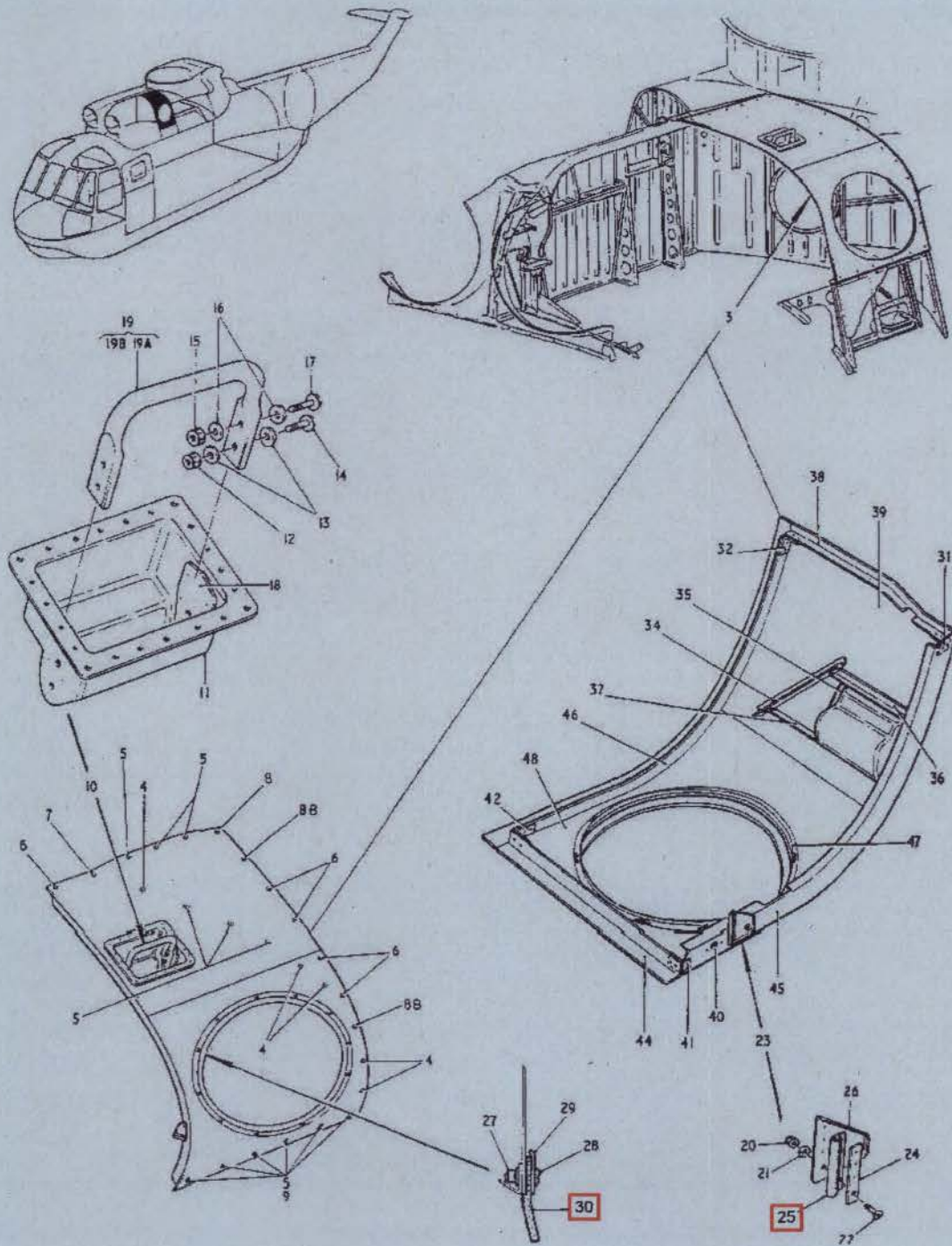


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Appendix B-3 Aircraft Components that May Contain Asbestos - Main-Rotor Gear-Box Hydraulic Pumps



Appendix B-4 Aircraft Components that May Contain Asbestos - Engine Cowling Panel, Rear (Right Hand Side)



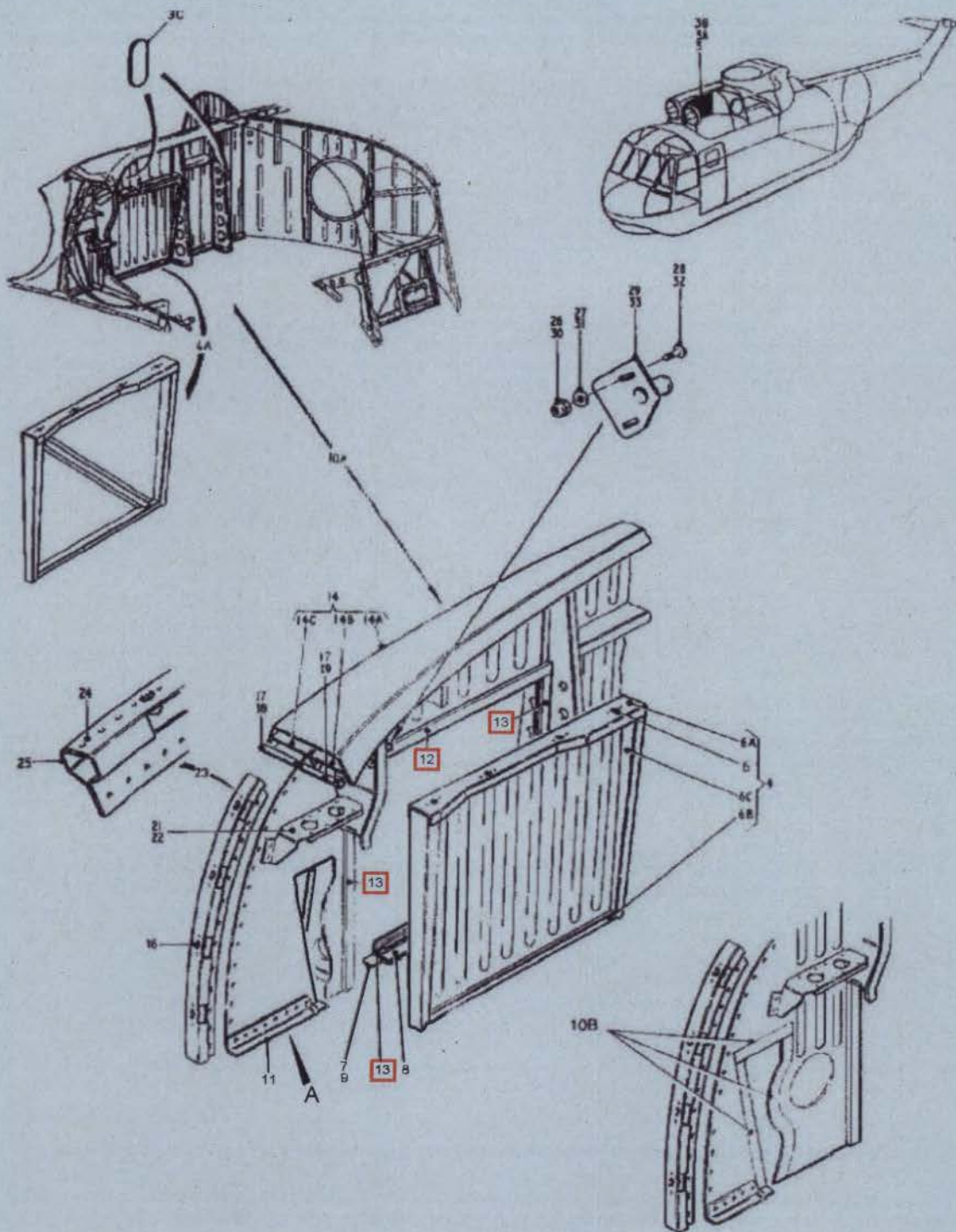
SWB00159A-01

Appendix B-5 Aircraft Components that May Contain Asbestos - Engine Cowling Panel, Rear (Left Hand Side)

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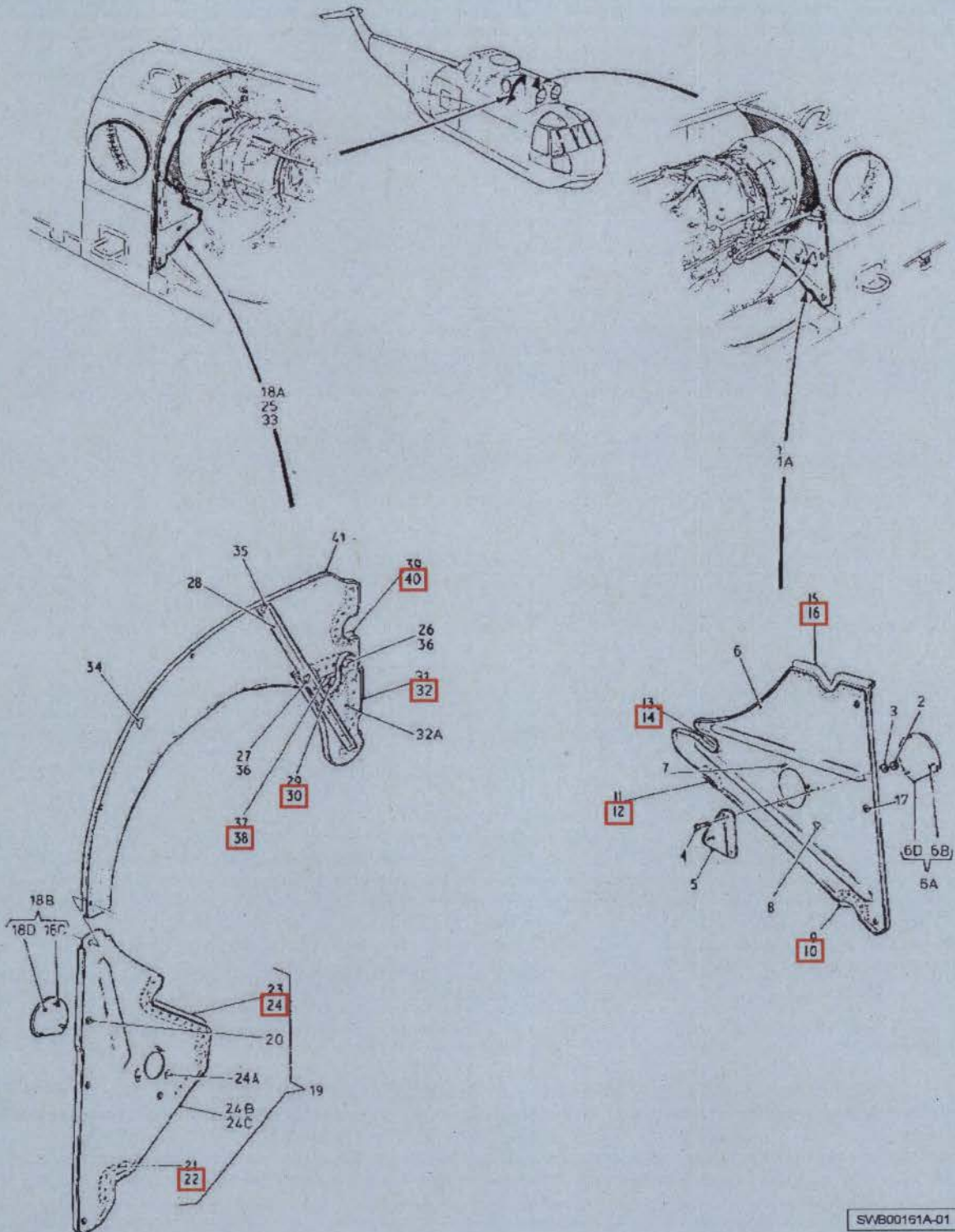
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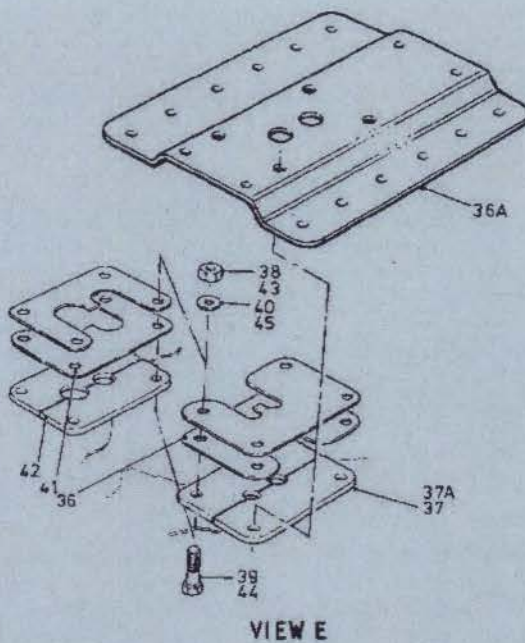
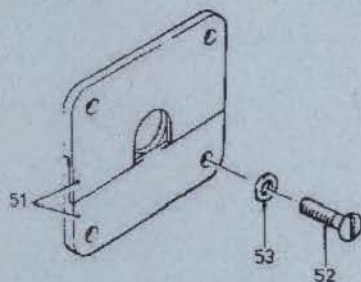
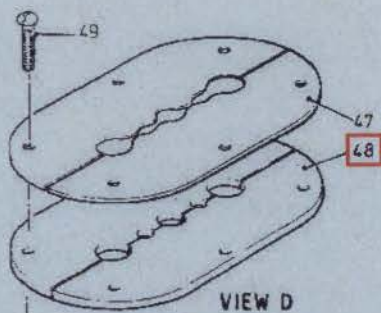
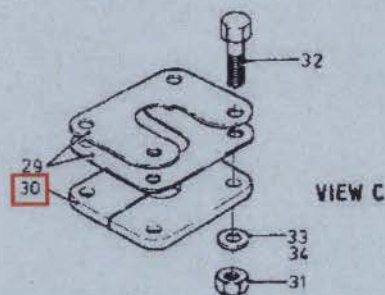
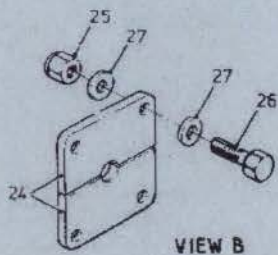
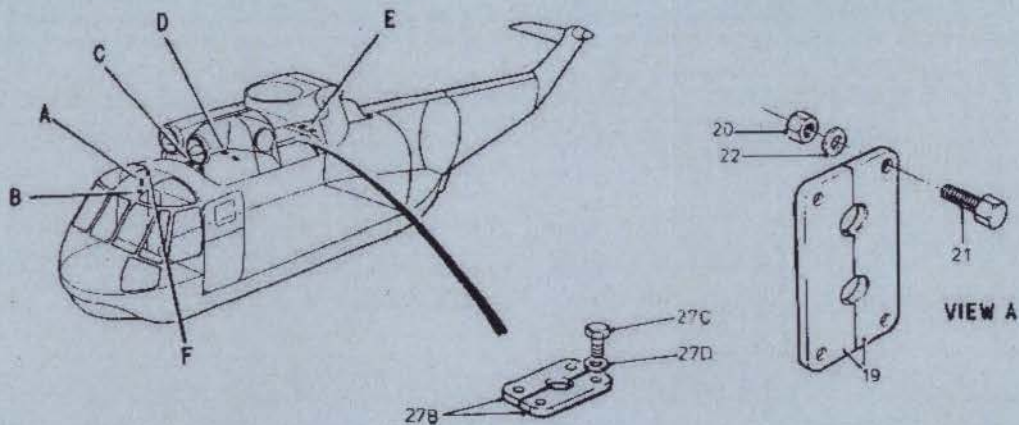


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Appendix B-6 Aircraft Components that May Contain Asbestos - Engine-Compartment Firewall Bulkhead

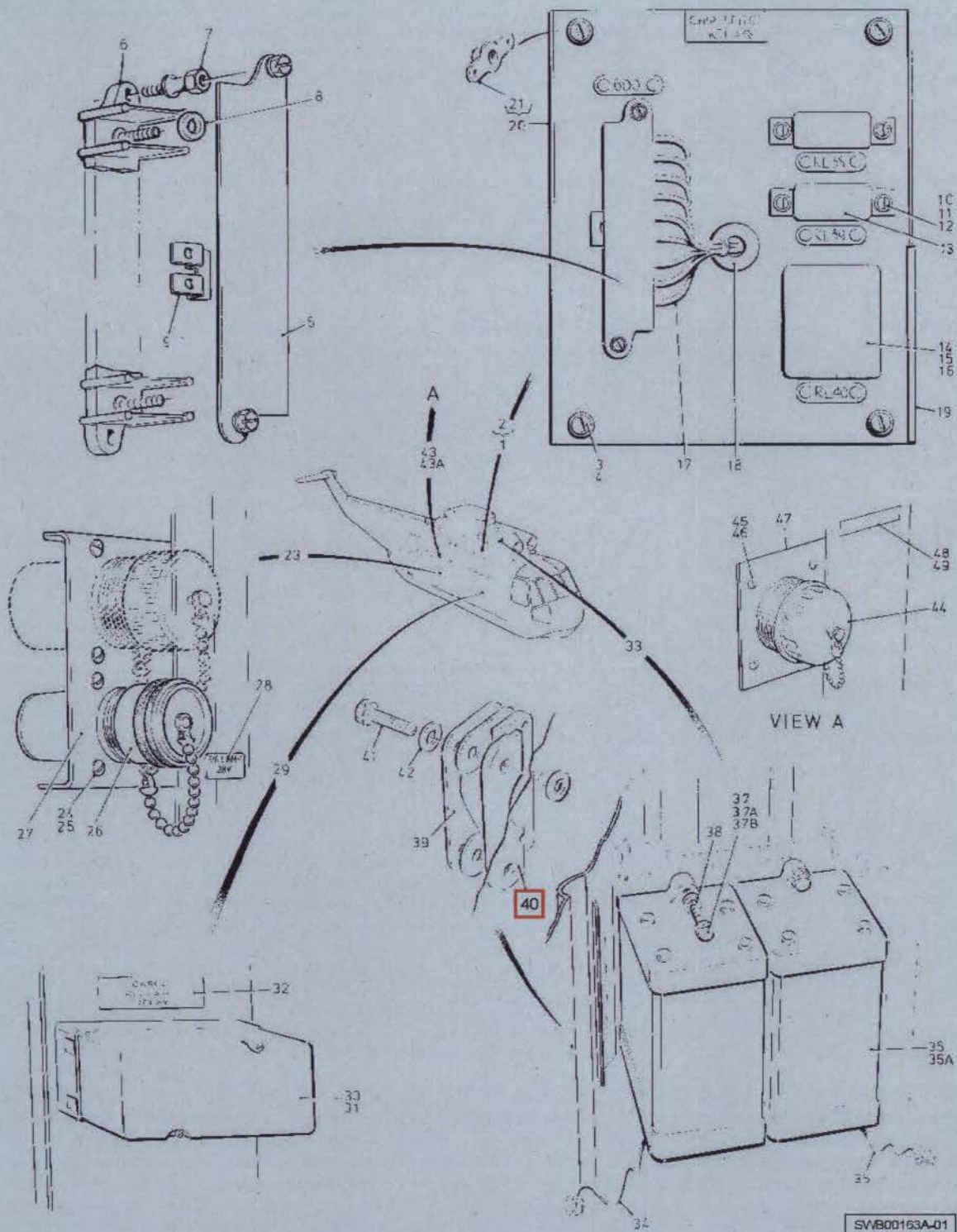


Appendix B-7 Aircraft Components that May Contain Asbestos - Power Unit Engine Bay

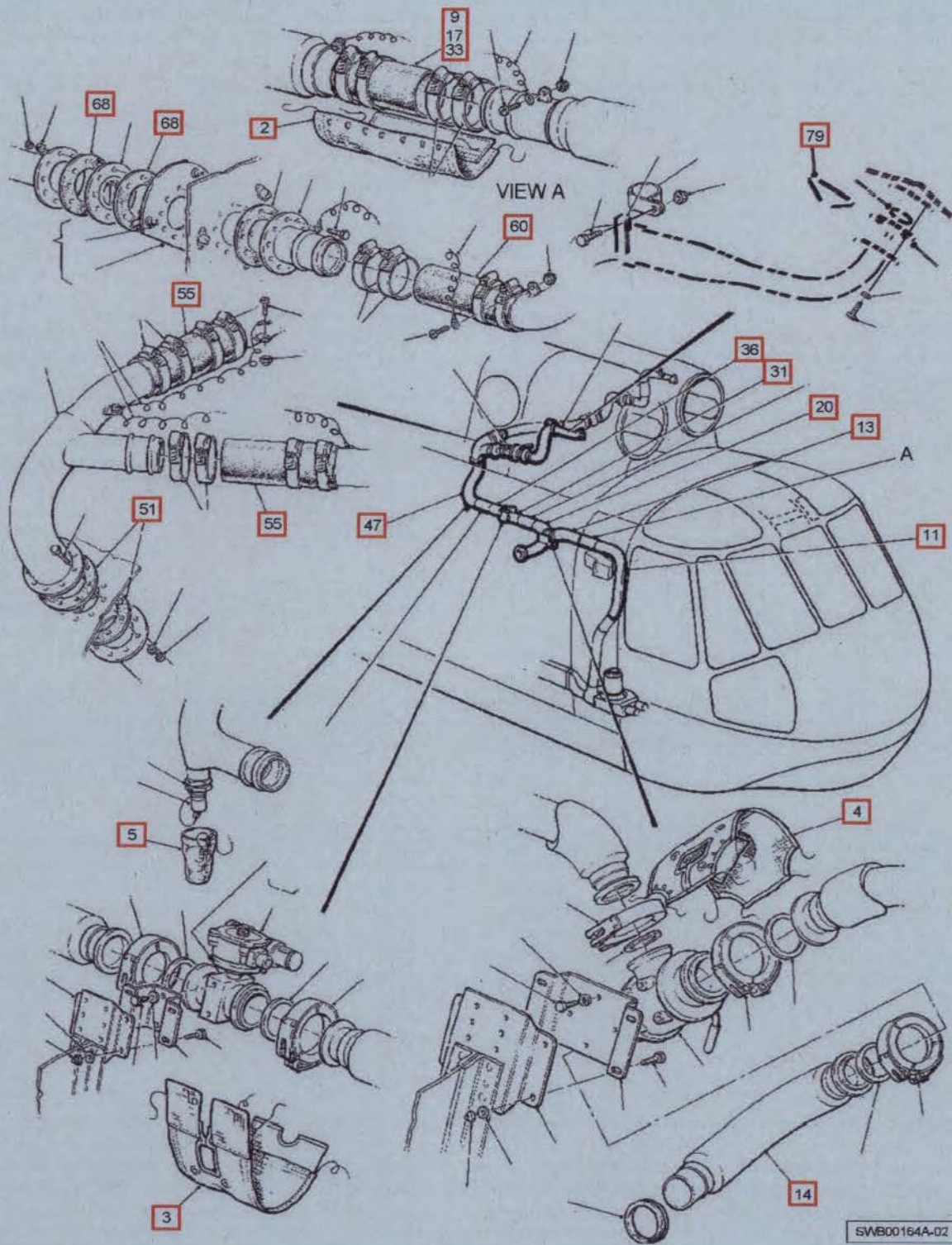


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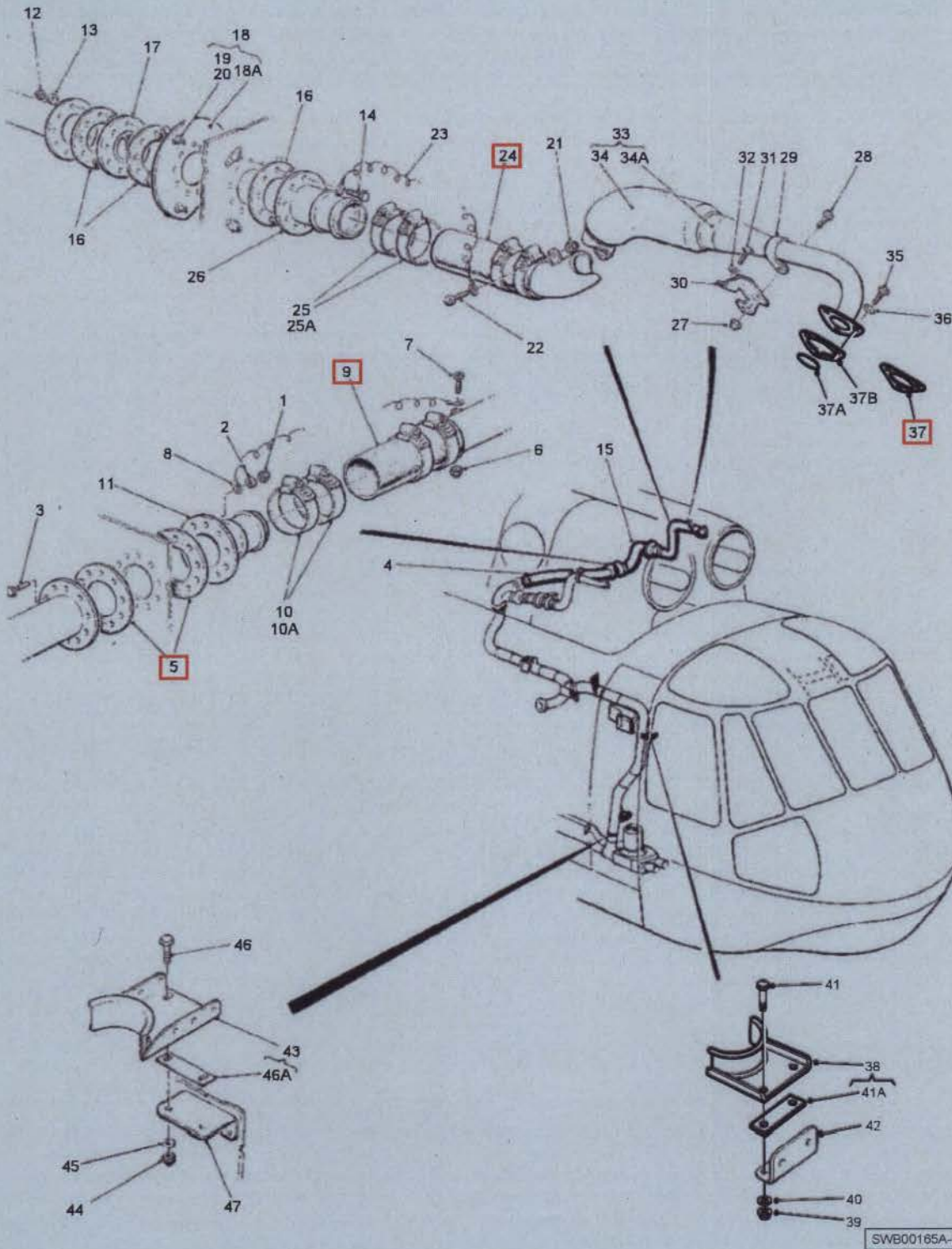
Appendix B-8 Aircraft Components that May Contain Asbestos - Fairleads and Conduits



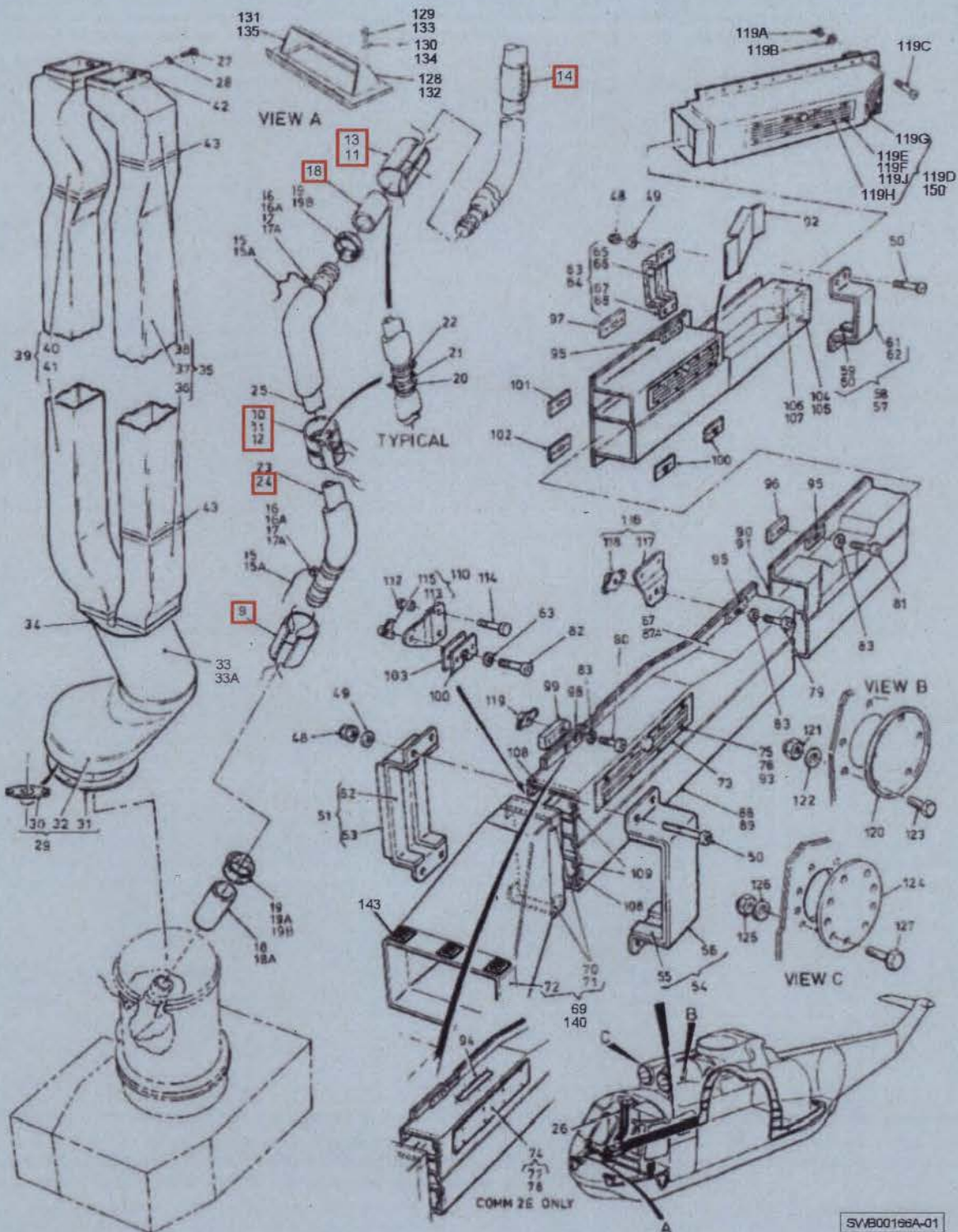
Appendix B-9 Aircraft Components that May Contain Asbestos - Electrical Power Supplies and Distribution (Control and Regulation, Cabin)



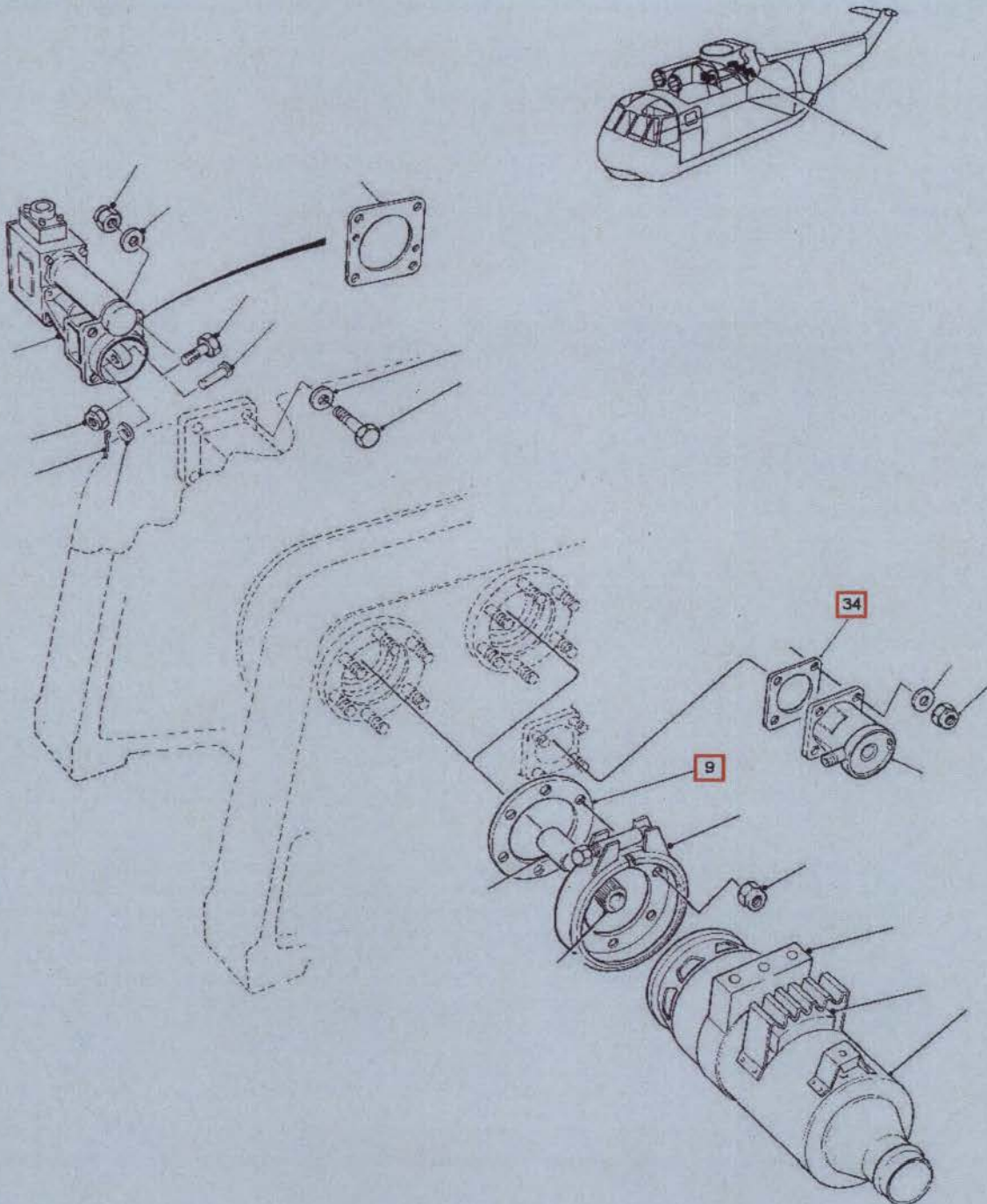
Appendix B-10 Aircraft Components that May Contain Asbestos - Heating and Ventilation



Appendix B-11 Aircraft Components that May Contain Asbestos - Heating and Ventilation



Appendix B-12 Aircraft Components that May Contain Asbestos - Heating and Ventilation



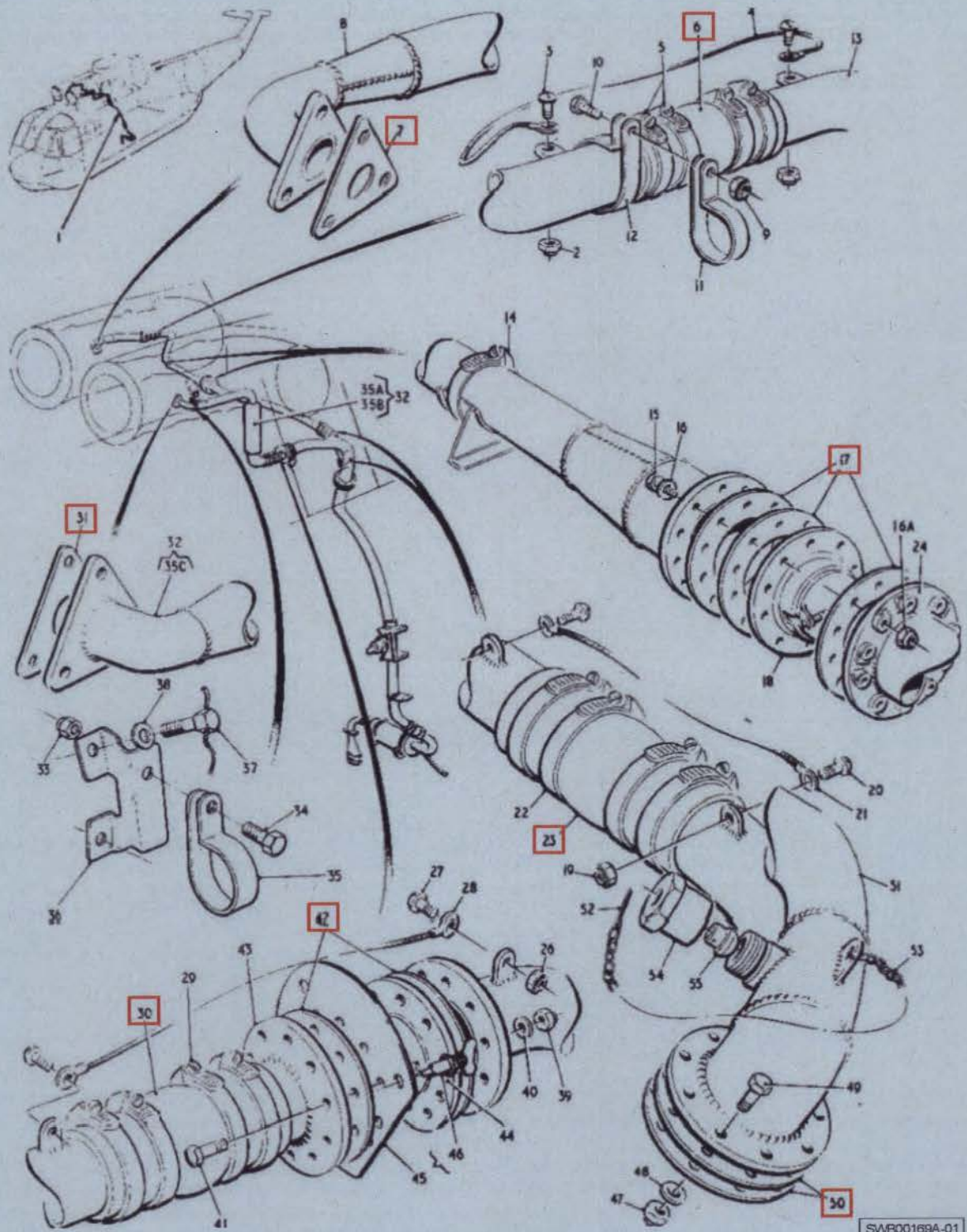
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Appendix B-13 Aircraft Components that May Contain Asbestos - Main-Rotor Gear-Box

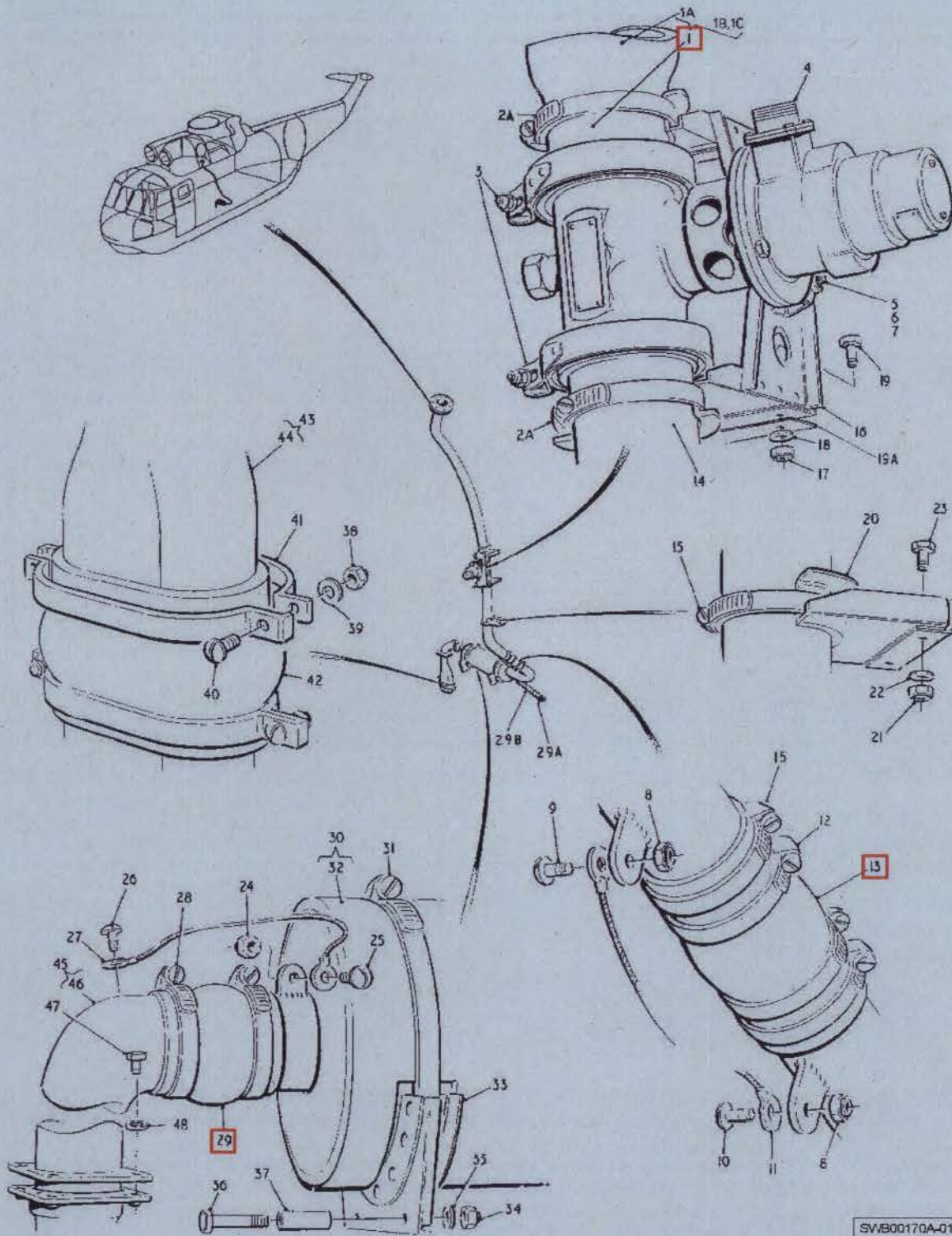
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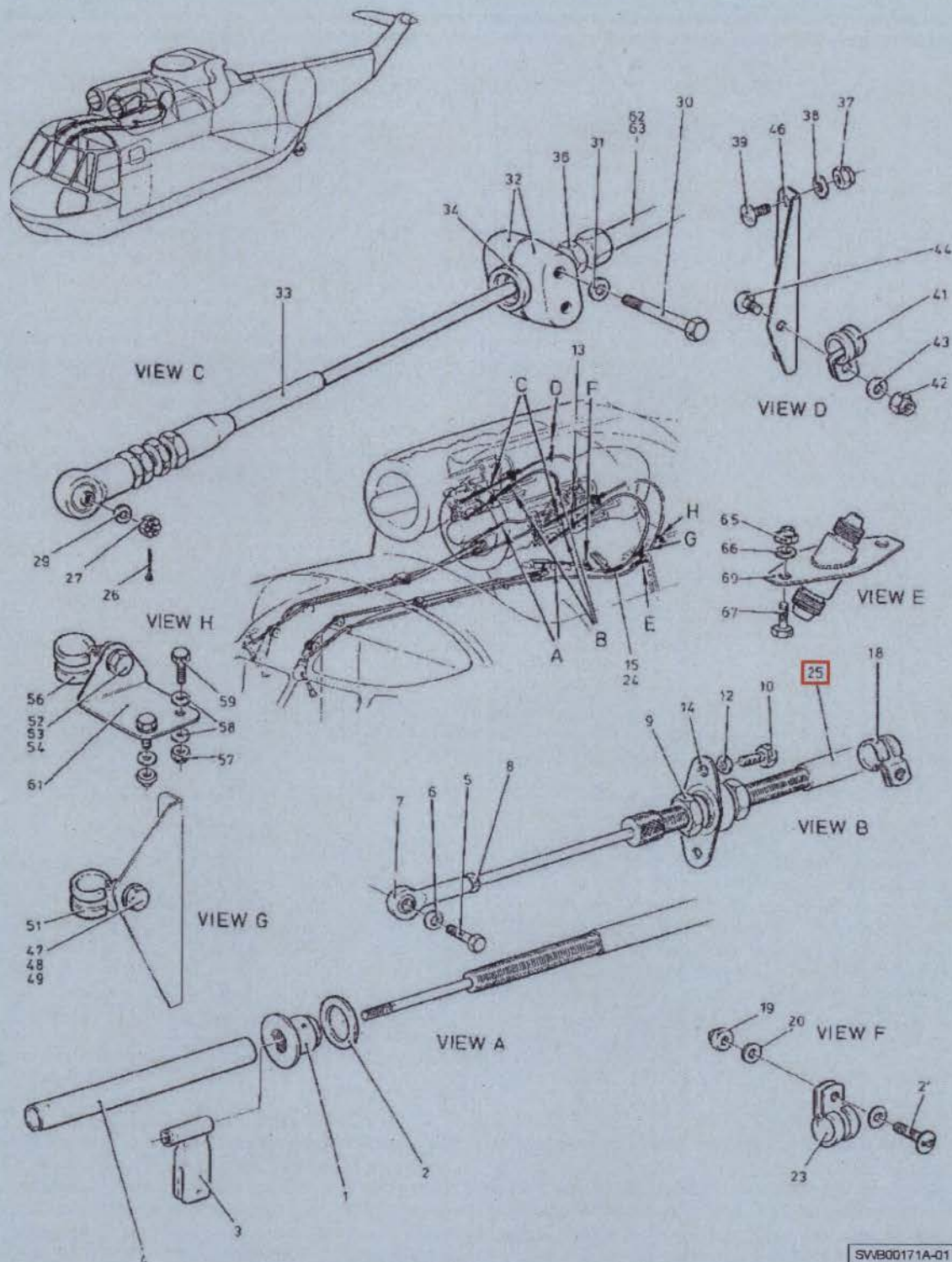
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Appendix B-14 Aircraft Components that May Contain Asbestos - Sonar Heating

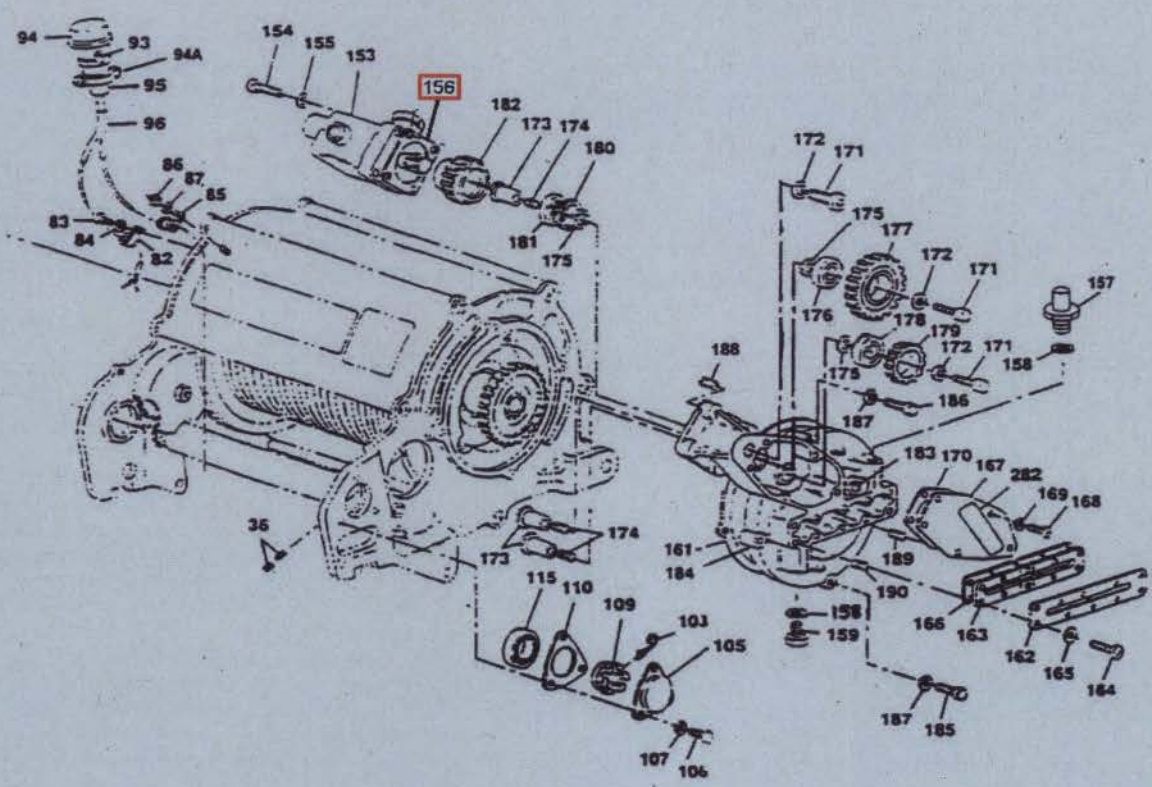


Appendix B-15 Aircraft Components that May Contain Asbestos - Sonar Heating



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Appendix B-16 Aircraft Components that May Contain Asbestos - Auto/Manual Control



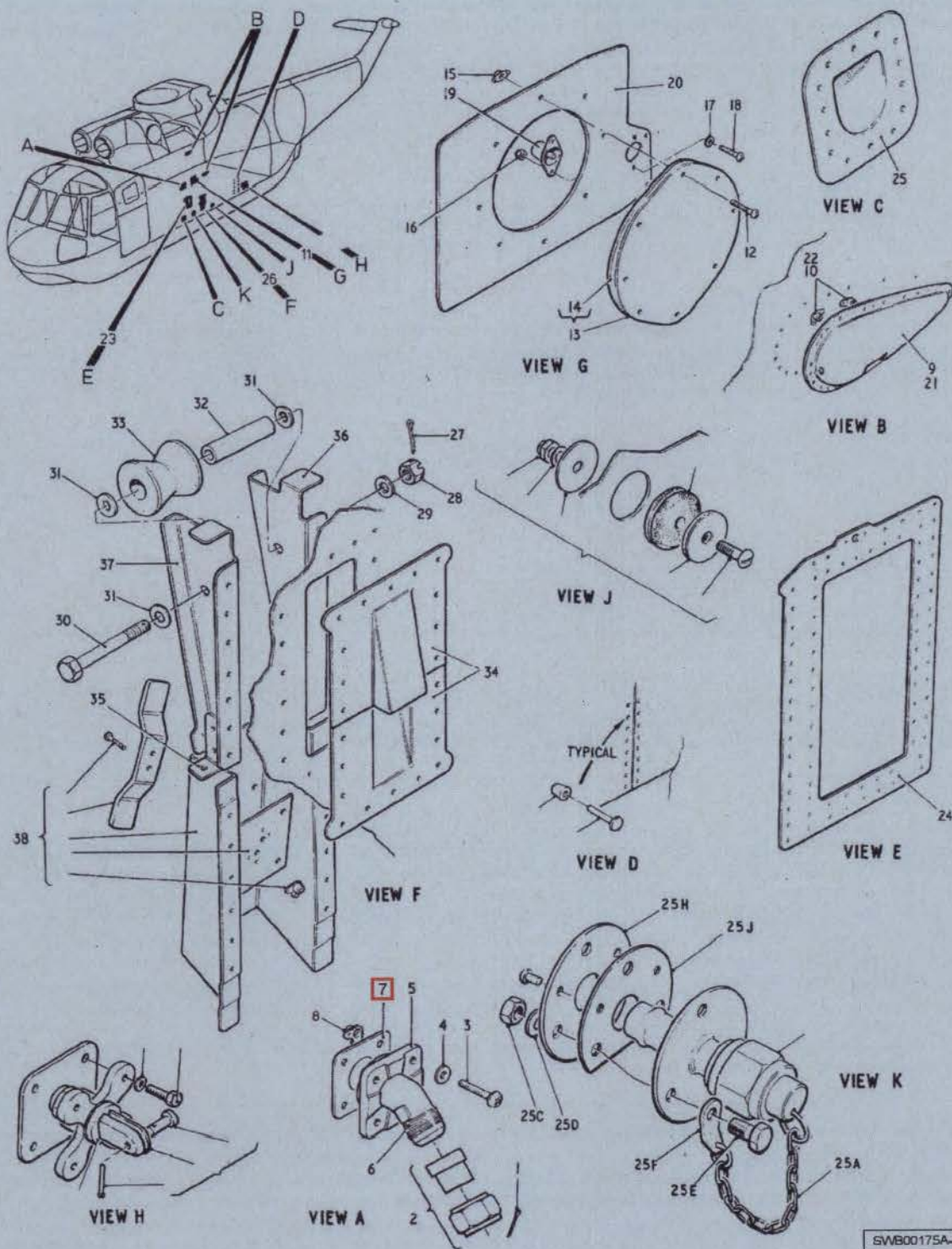
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Appendix B-17 Aircraft Components that May Contain Asbestos - Hoist

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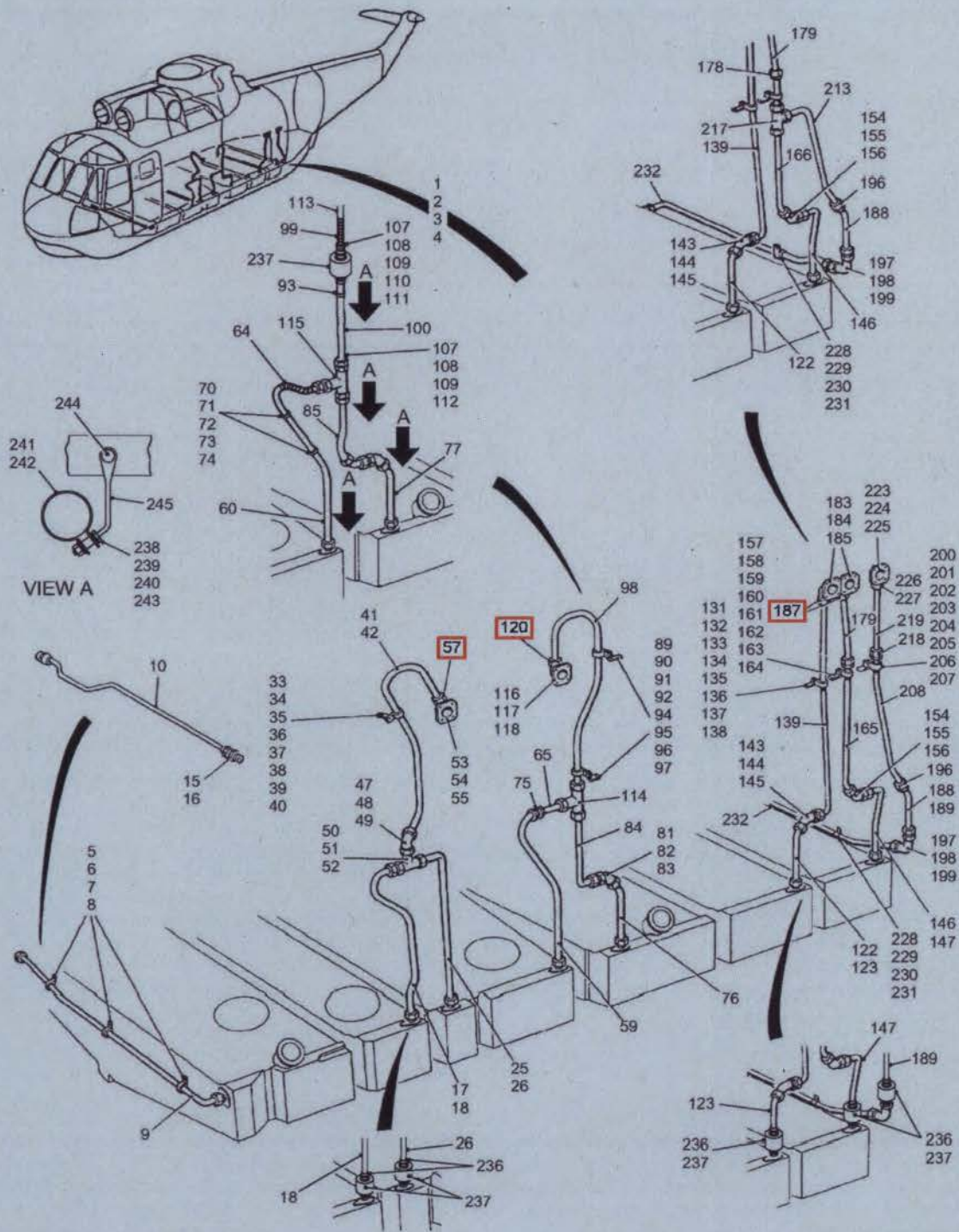
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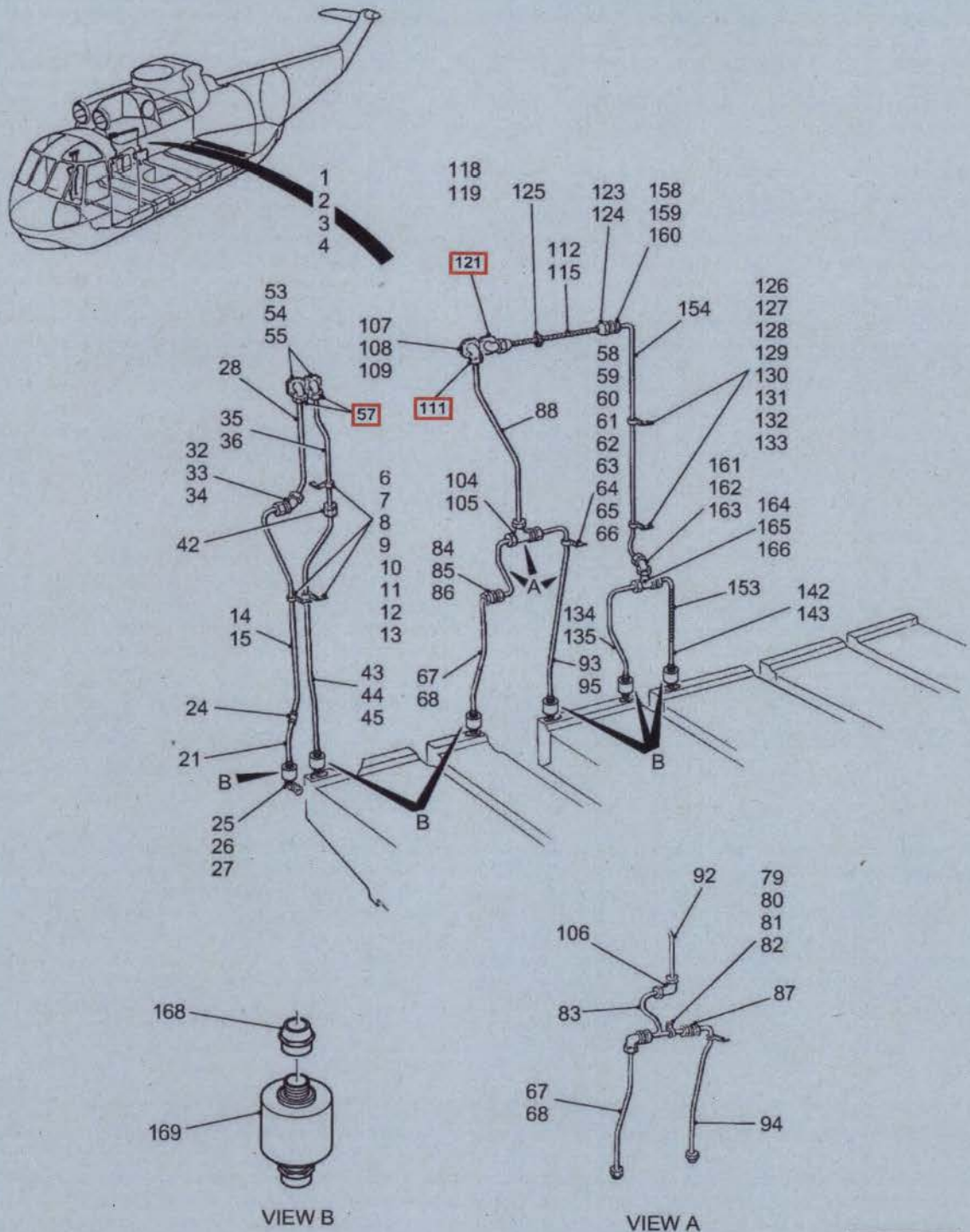
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Appendix B-18 Aircraft Components that May Contain Asbestos - Fuselage



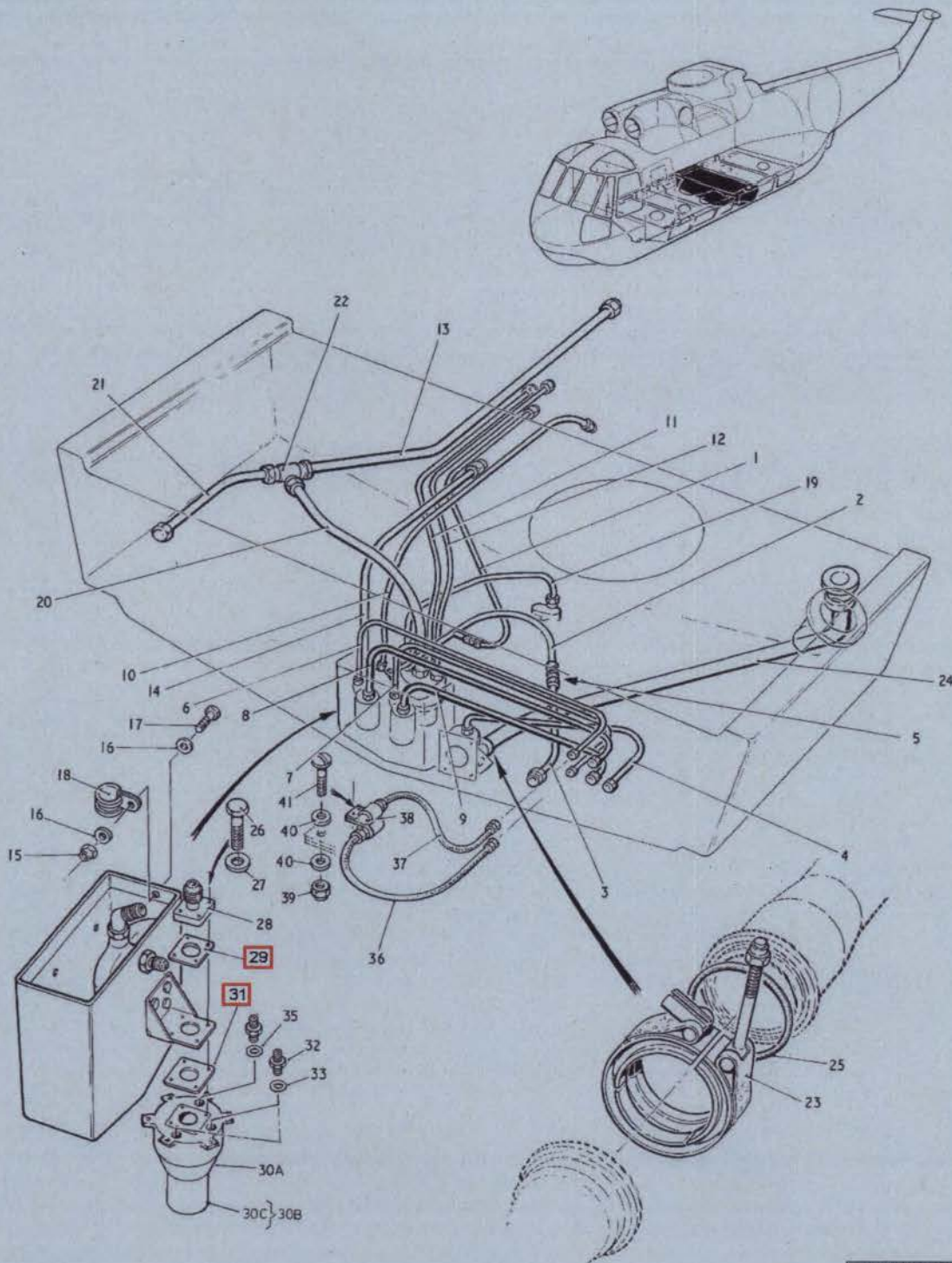
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Appendix B-19 Aircraft Components that May Contain Asbestos - Fuel Cell Vent Lines



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Appendix B-20 Aircraft Components that May Contain Asbestos - Fuel Cell Vent Lines



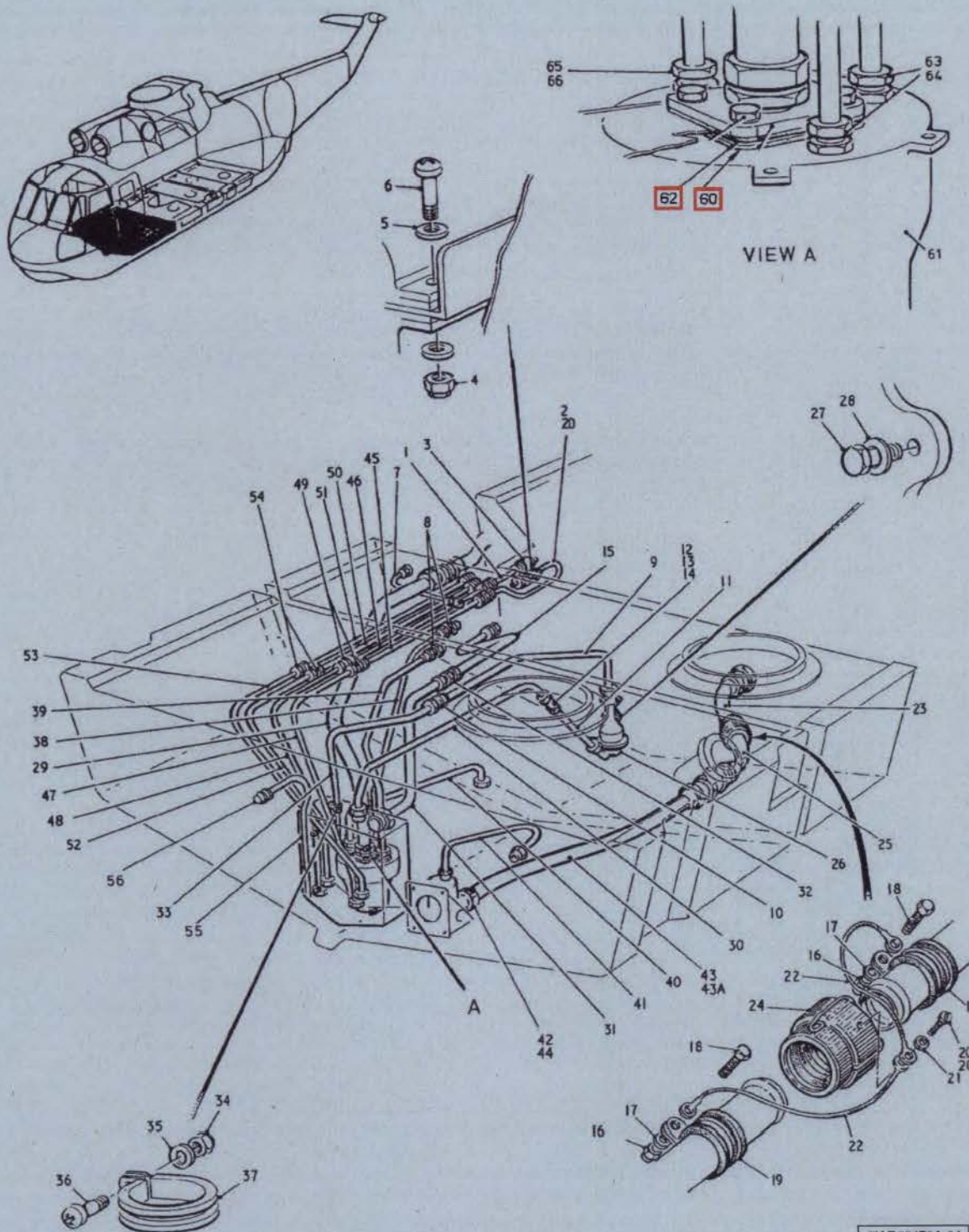
SMB00178A-01

Appendix B-21 Aircraft Components that May Contain Asbestos - Fuel System, Lower Fuselage

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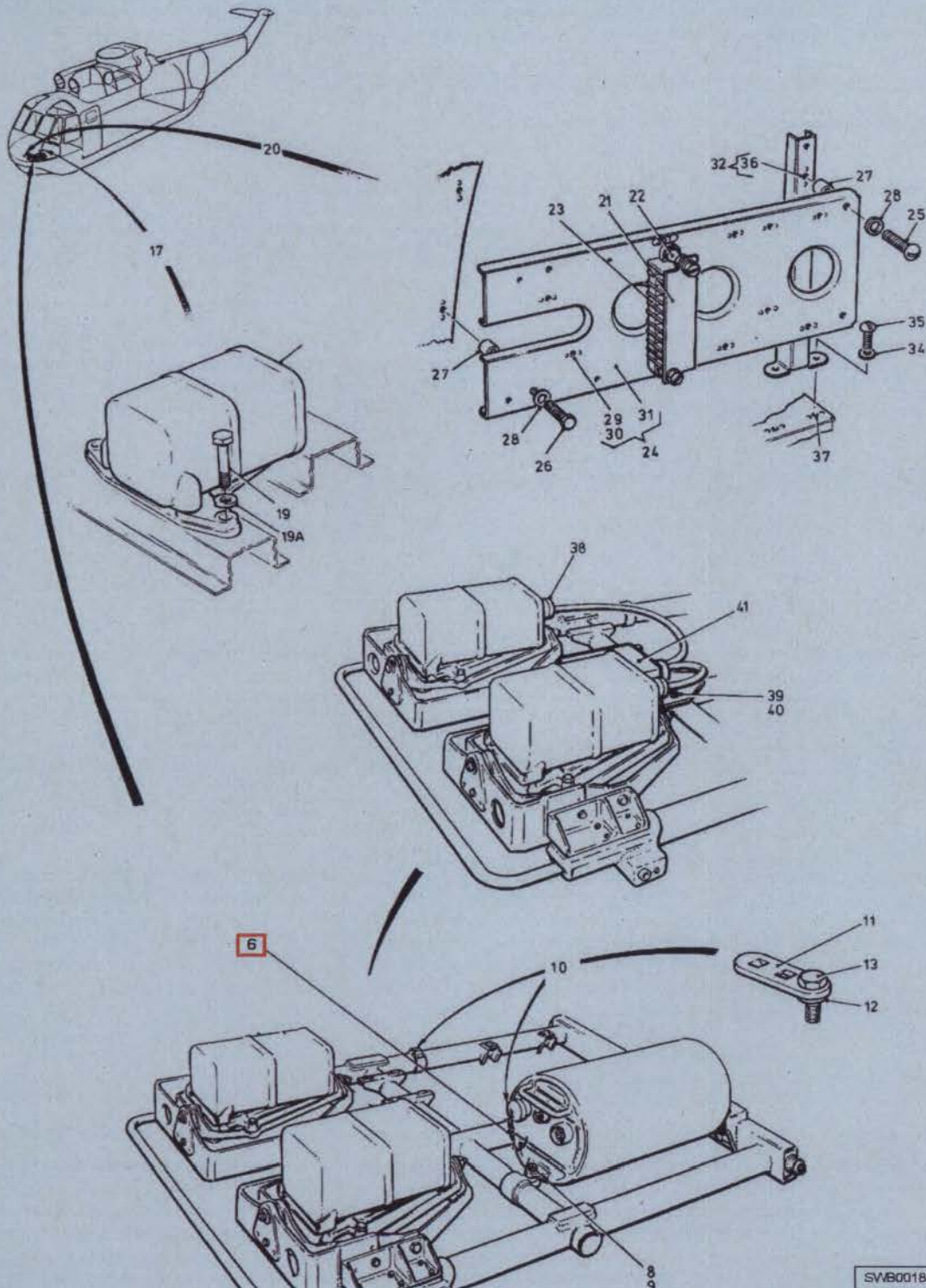


Appendix B-22 Aircraft Components that May Contain Asbestos - Fuel System, Lower Fuselage

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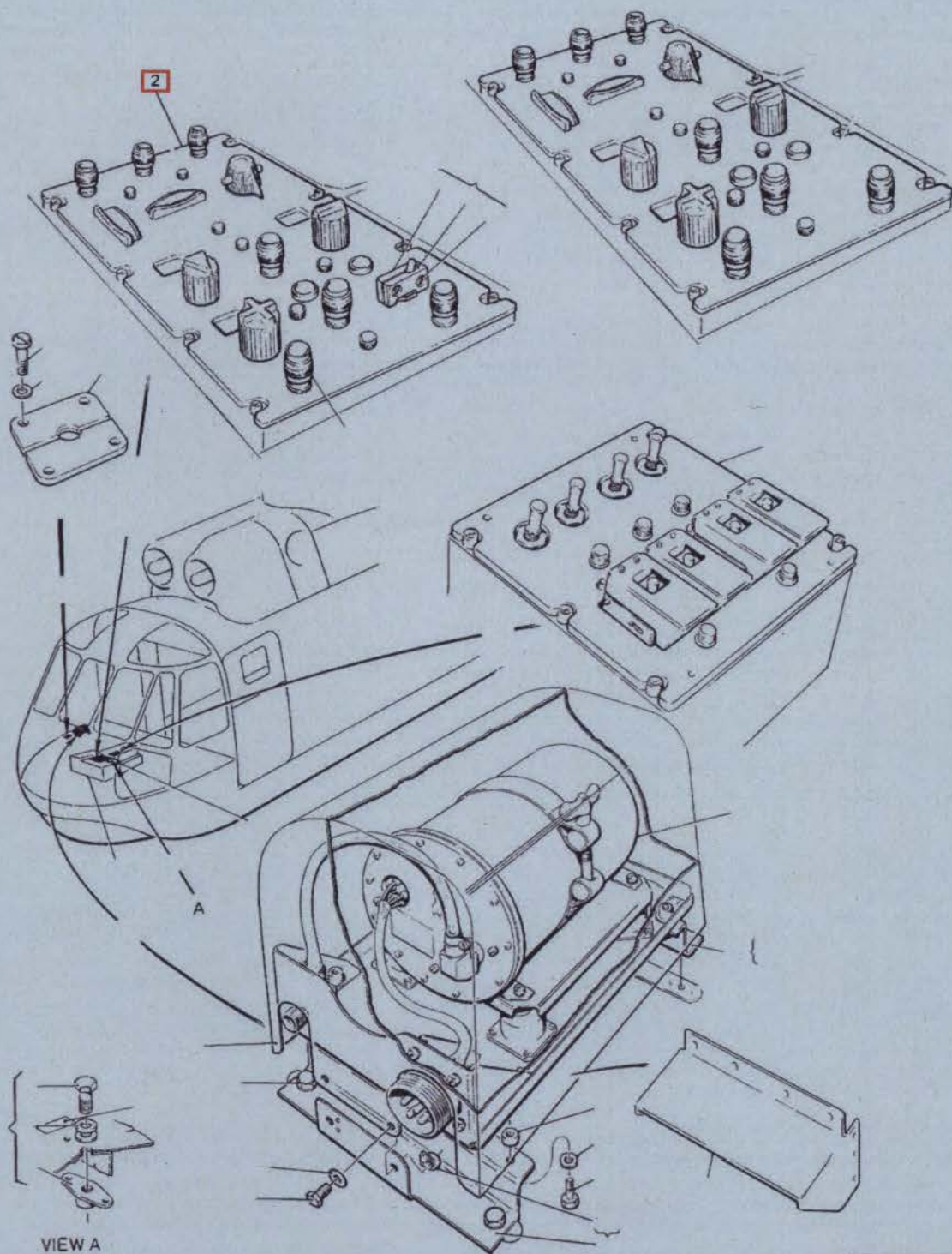
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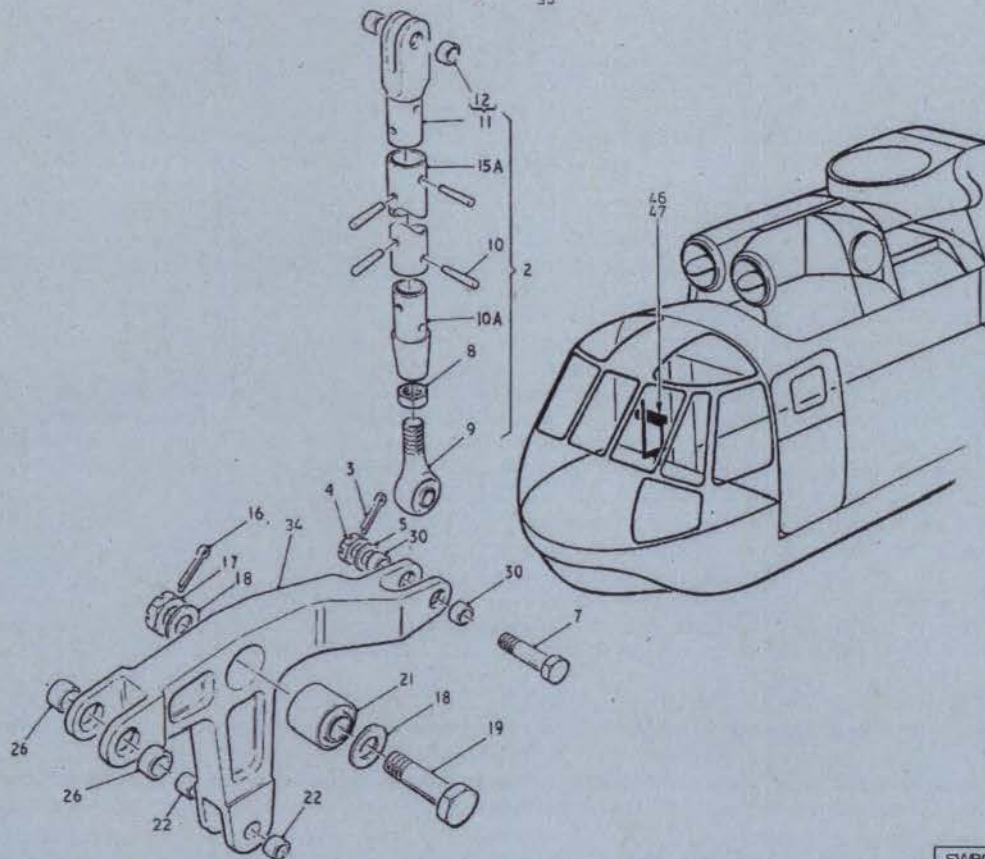
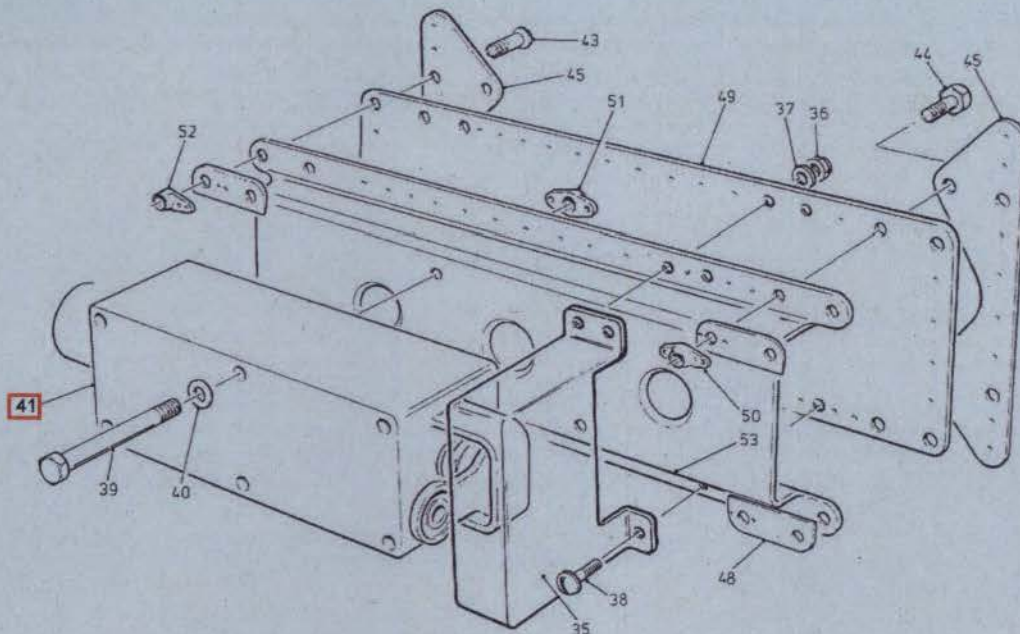
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Appendix B-23 Aircraft Components that May Contain Asbestos - Autopilot



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Appendix B-24 Aircraft Components that May Contain Asbestos - Autopilot



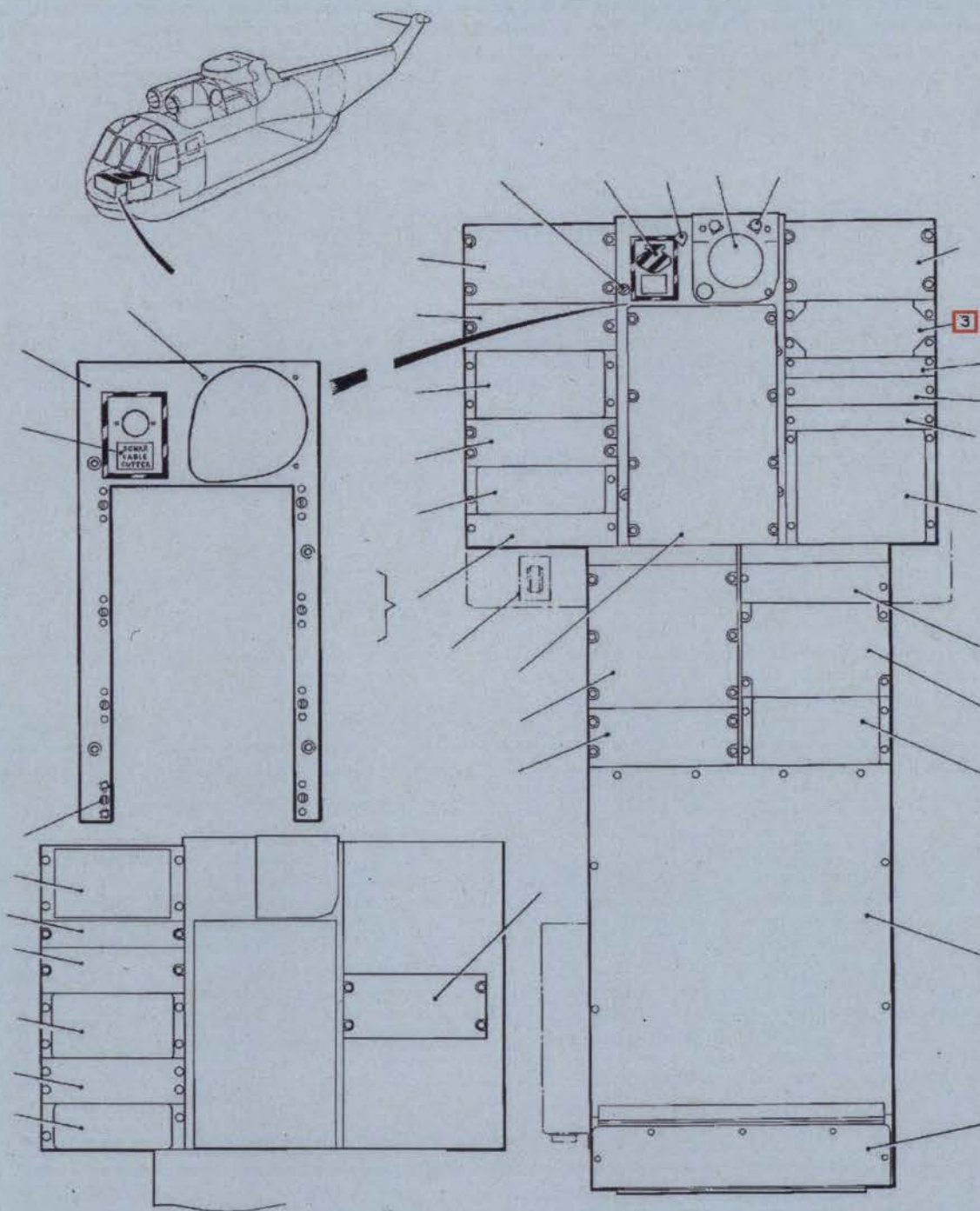
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Appendix B-25 Aircraft Components that May Contain Asbestos - Collective Pitch Control

03--MPL115

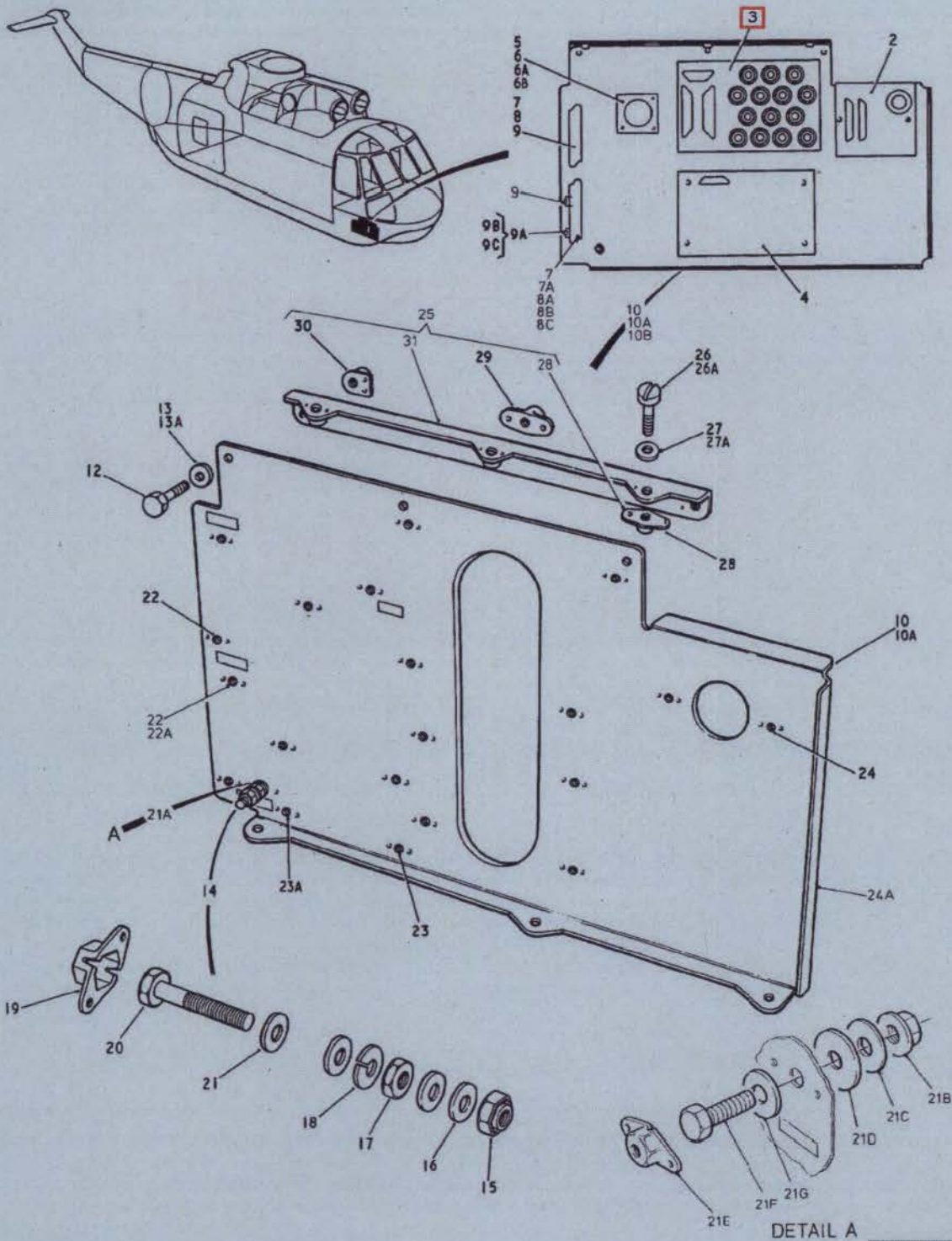
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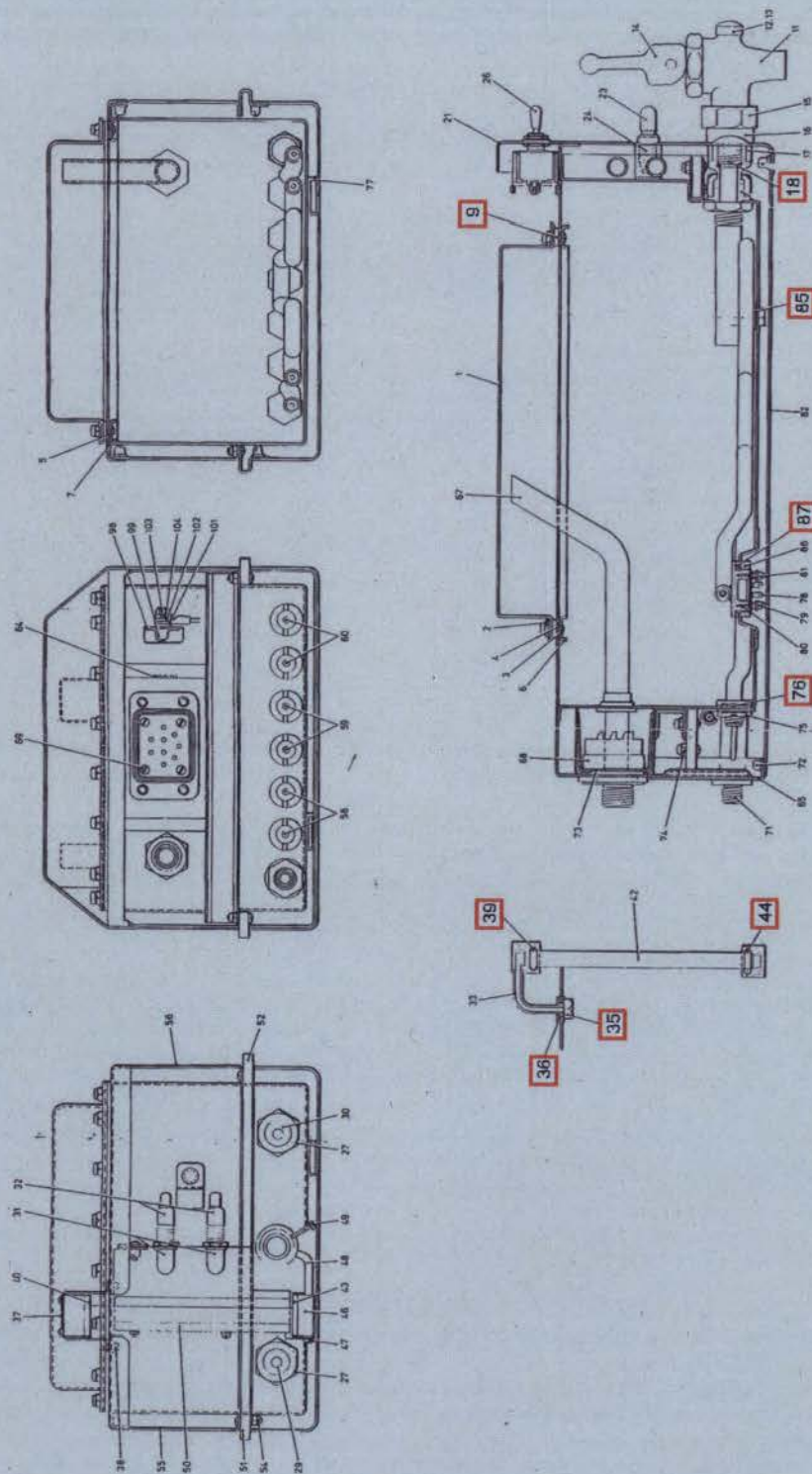


SWB00183A-01

Appendix B-26 Aircraft Components that May Contain Asbestos - Interseat Console



Appendix B-27 Aircraft Components that May Contain Asbestos - Intercomm



SVB00185A-01

Appendix B-28 Aircraft Components that May Contain Asbestos - Water Boiler

ANNEX C

SME ADVICE FROM INSTITUTE OF NAVAL MEDICINE

(9) Refer to the Health and Safety Executive (HSE) items that follow when you do work on engines or equipment that may contain asbestos:

(a) Removal of Compressed Asbestos Fibre (CAF) gaskets and asbestos rope seals:

<http://www.hse.gov.uk/pubns/guidance/a25.pdf>

(b) For data on Personal Protective Equipment (PPE):

<http://www.hse.gov.uk/pubns/guidance/em6.pdf>

(c) For data on disposal of asbestos waste:

<http://www.hse.gov.uk/pubns/guidance/em9.pdf>

WARNING 1 : YOU MUST ALWAYS WEAR PPE WHEN YOU DO WORK ON ENGINES OR EQUIPMENT THAT MAY CONTAIN ASBESTOS MATERIAL. ASBESTOS IS A DANGEROUS MATERIAL AND CAN CAUSE DAMAGE TO YOUR HEALTH.

WARNING 2 : HEAT ILLNESS: IN HOT WEATHER, THE DONNING OF PPE SIGNIFICANTLY INCREASES THE THERMAL BURDEN ON THE OPERATOR. THE TASK RISK ASSESSMENT SHOULD CONSIDER THIS RISK AND ENSURE THAT ADEQUATE CONTROL (TIME ON TASK IN PPE, REST BREAKS IN A COOL AREA, HYDRATION, ETC.). JSP539 REFERS.

WARNING 3 : AREA CONTROL: YOU MUST KEEP A 5 METRE BOUNDARY FOR NEIGHBOURING WORKERS, UNLESS THEY DON FFP3 DISPOSABLE DUST MASK OR AN ORI-NASAL RESPIRATOR/FULL-FACE RESPIRATOR WITH ANY FILTER THAT HAS P3.

(10) Wearing of PPE when working on engines or equipment that may contain asbestos must be as follows:

- Footwear – not withstanding the HSE guidance for wellington boots, standard aircraft applicable footwear only is to be worn when accessing the aircraft
- FFP3 disposable respirator or Ori-nasal/full-face respirator with a P3 filter (user should be fitted and tested for the type/size used)
- Type 5/6 overall
- Disposable nitrile gloves (double glove each hand) Appendix C-1 refers.

(11) To prevent asbestos fibres from becoming airborne apply de-ionised water to the seal. Ensure a mist pattern only is used.

- (12) Clean the surfaces where asbestos fibres might have been deposited as follows:
 - (a) Remove loose fibres with a type 'H' vacuum.
 - (b) Wipe surfaces with a damp lint free cloth. Fold contaminated side of cloth inside before placing in waste bag.
- (13) When work on engines or equipment that may contain asbestos materials is complete, remove PPE clothing as follows:
 - (a) Rollback the coverall from the hood down so that the coverall ends up inside out.
 - (b) Remove the outer pair of nitrile gloves.
 - (c) Remove the FFP3 disposable respirator or Ori-nasal/full-face respirator. For re-useable respirators, clean outer surfaces with a damp cloth before stowing. Wear FFP3 while doing this for belt and braces.
 - (d) Remove the inner pair of nitrile gloves.
- (14) On completion of work assume that everything is contaminated with asbestos fibres and dispose of as follows:
 - (a) Double bag.
 - (b) Apply a warning label to the bag to inform that the bag contains asbestos contaminated materials. Use formal Asbestos warning stickers if available.
 - (c) Use a local licensed waste contractor to dispose of the contaminated materials.



USE THIS TYPE ONLY



DO NOT USE

- NSN 8415-99-789 6046 SIZE 6-6½
- 6047 SIZE 7-7½
- 6048 SIZE 8-8½
- 6049 SIZE 9-9½

WARNING: BOTH STYLE OF GLOVE HAS THE SAME NSN

SWB00172A-01

Appendix C-1 - Disposable Nitrile Gloves

End of Data Module

03--MPL115

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Product Related Asbestos Register

ACM - Parts Identification					Identification of MOD Aircraft Affected						
Platform	Part Number	Description	IPC Ref	System	Mk3	Mk3A	Mk4	Mk5	Mk6	Mk7	
Sea King	AM763-24	Gasket	41-2 4A-78A/80A	Fuel sustem lower fuslage	*	*	*	*	*	*	
Sea King	AM763-24	Gasket	41-2 8-62A	Fuel sustem lower fuslage	*	*	*	*	*	*	
Sea King	AM763-24	Gasket	97-1-9D 26-44c	Fuel sustem lower fuslage	*	*	*	*	*	*	
Sea King	AN4047-1	Gasket	51-3-1 5-9	Main Gear Box Acc Drive	*	*					
Sea King	AN763-12	Gasket	15-34 20-007	Fuel System venting	*	*	*	*	*	*	
Sea King	AN763-12	Gasket	41-3 1A-48/118/158	Fuel System venting	*	*	*	*	*	*	
Sea King	AN763-12	Gasket	41-3 2A-25/56/61	Fuel System venting	*	*	*	*	*	*	
Sea King	AN763-24	Gasket	41-2 4A-78/80	Fuel sustem lower fuslage	*	*	*	*	*	*	
Sea King	AN763-24	Gasket	41-2 8-60/62	Fuel sustem lower fuslage	*	*	*	*	*	*	
Sea King	AN763-24	Gasket	97-1-9D 26-44B	Fuel sustem lower fuslage	*	*	*	*	*	*	
Sea King	B100	Fabric Peel Ply	99-3-5 1-544	Consumable list	*	*		*	*	*	
Sea King	MS9136-01	Gasket	51-3-1 5-9A	Main Gear Box Acc Drive	*	*					
Sea King	NDN3305	RPU	70-1 6-6	Autostab/Autopilot	*	*	*	*	*	*	
Sea King	NDN8681-01	Controller AFCS	70-1 2-2	Autostab/Autopilot	*		*				
Sea King	NDN8140-01	Parallel Actuator Pre Mod 490	19-2 4-41	Collective flight controls	*						
Sea King	SW08G	Bearing	31-3 1-42C	Cargo sling 8000lb	*	*	*				
Sea King	WD0383-00010-043	Waterproof floor Assy	30-31 1-20A	Furnishings and interior equipment	*	*					
Sea King	WD0383-00010-101	Waterproof floor	30-31 1-31	Furnishings and interior equipment	*	*					
Sea King	WD0383-00010-103	Waterproof floor	30-31 1-32	Furnishings and interior equipment	*	*					
Sea King	11BWG08	Bearing	31-3 1-24D	Cargo sling 8000lb	*	*	*				
Sea King	MS9134-01	Gasket	WAP108H-0108-136	Rescuss Hoist	*	*	*	*	*	*	

IPC Components with Hazard Code Hban					Mk3	Mk3A	Mk4	Mk5	Mk6	Mk7
Platform	Part Number	Description	IPC Ref	System						
Sea King	AA34024-14	AD3400 VHF-UHF Controller	28-1-4 24C-3B	Radio, cockpit				*	*	
Sea King	AA34024-14	AD3400 VHF-UHF Controller	28-1-5 31A-70B	Radio, cockpit				*	*	
Sea King	AA34024-14	AD3400 VHF-UHF Controller	28-1-5 37B-51B	Radio, cockpit				*	*	
Sea King	AA34024-14	AD3400 VHF-UHF Controller	60-23 1-2A	Radio						*
Sea King	MS27473T14B35S	Connector	98-60 8D-92	Electrical Cable Breakdown				*		
Sea King	Royco 756	Alternative Hyd fluid	99-3-5 1-53B	Consumable list	*	*	*	*	*	*
Sea King	TOLUOL	Toluene	99-3-5 1-120	Consumable list	*	*	*	*	*	*
Sea King	UA6047-5 GOLD Part No 8-994-116-0 DAP116N-0101-2B1 Leaflet S5	Distribution Box	60-1-2 1-3	Radio				*		

IPC Components with Hazard Code HAX (Was Asbestos, now asbestos free)					Mk3	Mk3A	Mk4	Mk5	Mk6	Mk7
Platform	Part Number	Description	IPC Ref	System						
Sea King	BAS180PSP0.5-GN271-1.00-B	Filler	15-28 4-32A	Fuselage cockpit windows	*	*	*	*	*	*
Sea King	BAS180PWB25-50AF26S	Seal	99-3-2 1-30B	Consumable list	*	*	*	*	*	*
Sea King	WD01-10-90679-101	Gasket	15-8 1A-13	Engine compartment firewall	*	*	*		*	*
Sea King	WD01-10-92821-101	Seal	40-1 2-10	Engine baffle plates	*	*	*	*	*	*
Sea King	WD01-10-92822-101	Seal	40-1 2-12	Engine baffle plates	*	*	*	*	*	*
Sea King	WD01-10-92823-101	Seal	40-1 2-14	Engine baffle plates	*	*	*	*	*	*
Sea King	WD01-10-92824-101	Seal	40-1 2-16	Engine baffle plates	*	*	*	*	*	*
Sea King	WD01-10-92892-101	Seal	40-1 2-22	Engine baffle plates	*	*	*	*	*	*
Sea King	WD01-10-92893-101	Seal	40-1 2-24	Engine baffle plates	*	*	*	*	*	*
Sea King	WD01-74-90003-101	Cuff Sleeve	24-1 1-6	Sonar Heating				*	*	
Sea King	WD01-74-90003-103	Cuff Sleeve	24-1 1-23/30	Sonar and Cabin Heating ventilation	*	*		*	*	
Sea King	WD01-74-90003-105	Cuff Sleeve	24-1 2-29	Sonar and Cabin Heating ventilation				*	*	
Sea King	WD01-74-90003-107	Cuff Sleeve	24-1 2-13	Sonar and Cabin Heating ventilation	*	*	*	*	*	
Sea King	WD01-74-90119-101	Gasket	24-1 1-17/42	Sonar and Cabin Heating ventilation	*	*	*	*	*	
Sea King	WD01-74-90123-101	Gasket	24-1 1-50	Sonar and Cabin Heating ventilation	*	*	*	*	*	
Sea King	WD01-74-90180-043	Pipe Assy	24-1 2-1	Sonar and Cabin Heating ventilation				*	*	
Sea King	WD0474-00005-043	Muff Assy	23-1 2-13	Cabin Heating ventilation			*			
Sea King	WD0481-22006-143	Panel Overhead console	55-2-1 45-19M	Electrical supply and distribution			*			
Sea King	WD4174-00044-043	Muff Assy	23-1 6-3	Cabin Heating ventilation	*	*	*			
Sea King	WD4174-00074-197	Diaphragm	23-1 5-9	Cabin Heating ventilation	*	*	*			
Sea King	WD4174-00092-043	Muff Assy	23-1 6-5	Cabin Heating ventilation	*	*	*			
Sea King	WD4174-00098-043	Muff Assy	23-1 2-10	Cabin Heating ventilation	*	*	*			
Sea King	WD4174-00099-043	Muff Assy	23-1 2-14	Cabin Heating ventilation	*	*	*			
Sea King	576801	Gasket	24-1 1-7/31	Sonar and Cabin Heating ventilatio	*	*	*	*	*	
Sea King	85106RC8-3AS	Connector	98-55 3N-63	Electrical Cable Breakdown		*				
Sea King	WD01-82-12175	CONNECTOR	20-5-1 1-106	HF Cooling	*	*	*	*	*	*
Sea King	WD01-82-12205-4	HOSE, EXHAUST	20-5-1 1-105	HF Cooling	*	*	*	*	*	*
Sea King	S6135-20702-2	Gimbal Ring pads	51-3-4E 32-5/32	Engine compartment transmission	*	*	*	*	*	*

RAPID WATER BOILERS HE62008 & HE62168 (Mod 559 overheat protection)

Product Related Asbestos Register

ACM - Parts Identification					Identification of MOD Aircraft Affected					
Platform	Part Number	Description	IPC Ref	System	Mk3	Mk3A	Mk4	Mk5	Mk6	Mk7
			WAP113F-W0819-13A6							
Sea King	HE5084M11	Gasket	pg 1006 Fig 1 Item 10	Water Boiler	HE62168	HE62168				
Sea King	HE50844Z46	Gasket	pg 1006 Fig 1 Item 180	Water Boiler	HE62168	HE62168				
Sea King	HE50844Z108	Washer Flat	pg 1008 Fig 1 Item 550	Water Boiler	HE62168	HE62168				
Sea King	HE50844Z40	Washer Flat	pg 1013 Fig 3 Item 50	Water Boiler	HE62168	HE62168				
Sea King	HE50844Z38	Packing Preformed	pg 1013 Fig 3 Item 90 x2	Water Boiler	HE62168	HE62168				
Sea King	HE50844Z96	Gasket	pg 1010 Fig 2 Item 170	Water Boiler	HE62168	HE62168				
Sea King	HE50844Z84	Washer Flat	pg 1013 Fig 4 Item 30/120	Water Boiler	HE62168	HE62168				
Sea King	HE50844Z51	Gasket	pg 1013 Fig 4 Item 90	Water Boiler	HE62168	HE62168				
Sea King	HE50844Z33	Washer	pg 1013 Fig 4 Item 140	Water Boiler	HE62168	HE62168				

WAP113F-W0819-13A6 only covers water boiler HE62008, however AP113F-0819-3 Ch 2-1 for HE62008 is replicated for the part numbers above in Ch 2-2 for HE62168.
Asbestos data only contained in MoD AP and not in WAP