

Explanatory Statement

Acts Interpretation Act 1901

Civil Aviation Safety Regulations 1998

Part 91, Part 133 and Part 138 Manuals of Standards — NVIS Amendments Instrument 2021 (No. 1)

Purpose

The *Part 91, Part 133 and Part 138 Manuals of Standards — NVIS Amendments Instrument 2021 (No. 1)* (the **MOS amendments**) amends:

- the *Part 91 (General Operating and Flight Rules) Manual of Standards 2020*
- the *Part 133 (Australian Air Transport Operation—Rotorcraft) Manual of Standards 2020*
- the *Part 138 (Aerial Work Operations) Manual of Standards 2020* (the **MOSs**).

The purpose of the MOS amendments is to embody, with modifications, the previously applicable requirements for the use of a night vision imaging system (**NVIS**). These requirements were previously contained in *Civil Aviation Order 82.6 (Night vision imaging system — helicopters) 2007 (CAO 82.6)* which was repealed on 2 December 2021.

CAO 82.6 established operational and airworthiness standards and approval requirements for the use of night vision goggles (**NVG**) in helicopter aerial work operations. CAO 82.6 operated essentially as a set of conditions on Air Operator Certificates (**AOCs**). It had the effect of rendering an AOC holder in breach of their AOC conditions if they made any unapproved use of NVG as a primary means of terrain avoidance for safe air navigation by means of visual surface reference external to an aircraft. The use of an NVIS in private operations was prohibited by CASA under instrument *CASA 288/07 – Direction – use of night vision devices prohibited in private operations*. These measures were necessary to regulate the safe use of an NVIS in the absence of an otherwise express statutory power. The express statutory powers to regulate the use of an NVIS are now contained in the legislation mentioned below.

Using these powers, CASA has amended the MOSs to re-express and modify the previous NVIS requirements, and tailor them for the specific operating environments now regulated by Part 91, Part 133 or Part 138 of CASR.

Legislation

The *Civil Aviation Act 1988* (the **Act**) establishes the regulatory framework for maintaining, enhancing and promoting the safety of civil aviation, with particular emphasis on preventing aviation accidents and incidents.

Subsection 98 (1) of the Act provides, in part, that the Governor-General may make regulations, not inconsistent with the Act, prescribing matters required or permitted by the Act to be prescribed, or necessary or convenient to be prescribed, for carrying out or giving effect to the Act. Relevantly, the Governor-General has made CASR.

The *Civil Aviation Safety Amendment (Part 91) Regulations 2018 (Part 91 of CASR)* were registered on 18 December 2018 and amended by the *Civil Aviation Legislation Amendment (Flight Operations—Miscellaneous Amendments) Regulations 2020* registered on 6 October 2020. Part 91 of CASR commences on 2 December 2021. Under regulation 91.040 of CASR, the Civil Aviation Safety Authority (**CASA**) may issue a Manual of Standards for Part 91 of CASR that prescribes matters required or permitted by that Part to be prescribed, or necessary or convenient for carrying out or giving effect to Part 91. This power is complemented by other provisions throughout Part 91 which empower CASA to prescribe specific matters in the MOS, in

particular subregulation 91.085 (1) of CASR which empowered the MOS to prescribe requirements for the conduct of an NVIS flight. The Part 91 MOS sets out “the rules of the air” for all pilots, and the general operating rules for pilots who are not operating under an AOC or other certificate and is the foundation for all aviation operations.

The *Civil Aviation Safety Amendment (Part 133) Regulations 2018 (Part 133 of CASR)* were made on 6 December 2018 and amended by the *Civil Aviation Legislation Amendment (Flight Operations—Miscellaneous Amendments) Regulations 2020* made on 1 October 2020. Part 133 of CASR commences on 2 December 2021. Under regulation 133.020 of CASR, CASA may issue a Manual of Standards for Part 133 of CASR that prescribes matters required or permitted by that Part to be prescribed, or necessary or convenient for carrying out or giving effect to Part 133. This power is complemented by other provisions, throughout Part 133, which empower CASA to prescribe specific matters in the MOS, in particular subregulation 133.265 (3) of CASR which empowered the MOS to prescribe requirements for the use of an NVIS. The Part 133 MOS sets out detailed requirements and safety standards for the conduct of rotorcraft air transport operations, including medical transport.

The *Civil Aviation Safety Amendment (Part 138) Regulations 2018 (Part 138 of CASR)* were registered on 18 December 2018 and amended by the *Civil Aviation Legislation Amendment (Flight Operations—Miscellaneous Amendments) Regulations 2020* registered on 6 October 2020. Part 138 of CASR commences on 2 December 2021. Under regulation 138.020 of CASR, CASA may issue a Manual of Standards for Part 138 of CASR that prescribes matters required or permitted by Part 138, or necessary or convenient for carrying out or giving effect to Part 138. This power is complemented by other provisions, throughout Part 138, which empower CASA to prescribe specific matters in the MOS, in particular subregulation 138.350 (3) of CASR which empowered the MOS to prescribe requirements for the use of an NVIS. The Part 138 MOS sets out the operational, procedural and safety risk management standards for the conduct of aerial work operations in aeroplanes and rotorcraft.

Each of the abovementioned Parts of CASR commence on 2 December 2021, as do the MOSs and the MOS amendments.

Section 4 of the *Acts Interpretation Act 1901* (the *AIA*) as applied by section 13 of the *Legislation Act 2003* (the *LA*) provides, among other things, that if an Act (including a regulation) is enacted and at a time after its enactment (the *start time*) the Act will confer power to make an instrument, that power may be exercised before the start time as if the relevant commencement had occurred. However, in general terms, the exercise of this power does not confer a power or right to impose an obligation on a person before the relevant commencement. Using section 4 of the *AIA*, the MOSs are made under regulations 91.040, 133.020 and 138.020 of CASR, regulations that will not commence until 2 December 2021.

The MOS amendments are made under the same heads of power, and on the same basis, as the MOSs themselves.

For reading convenience, in this Explanatory Statement mention of a provision with:

- the prefix “91.” — is a reference to that provision in Part 91 of CASR
- the prefix “133.” — is a reference to that provision in Part 133 of CASR
- the prefix “138.” — is a reference to that provision in Part 138 of CASR.

The MOS amendments

The MOS amendments set out the detailed technical flying and equipment requirements and related safety standards for the use of an NVIS, but based on and arising from the relevant rules that were in CAO 82.6. The MOSs, when the MOS amendments are compiled into them, are

intended to be practical manuals designed to mitigate the risks that might arise from the use of an NVIS under Part 91, Part 133 or Part 138 — being mitigations in many cases identical to those that were in force immediately before 2 December 2021 under CAO 82.6.

As far as possible in the context of the matters to be addressed, the MOS amendments have been drafted in as plain a style of English presentation as the technical nature of the material will allow, to ensure that the document is, and is as usable as, such a practical manual. It contains numerous procedural and equipment requirements to be observed by a pilot in command to ensure safe NVIS flight and NVIS operations.

This Explanatory Statement provides a note on, or a reference to, every amendment provision to explain its effect, as required by section 15J of the LA but it is not a repeat of the highly technical layered content of the MOS amendments or in any sense an aviator's or a reader's substitute for what the MOS amendments actually state. It provides a general explanation of the purpose and operation of the MOS amendments as required by section 15J.

In support of the MOS amendments, CASA will, when the amendments have been compiled into their respective MOSs, publish guidance materials on NVIS use, offering further practical information and explanation. This guidance will further explain technical requirements of the MOSs with respect to NVIS and, using plain language, it will clarify acceptable means of compliance with the MOS amendments. This material will, therefore, complement the explanations of the purpose and operation of the MOS amendments given in this Explanatory Statement.

As might be expected for a subject matter that encompasses safe NVIS use across various, different kinds of operations, the MOS amendments are detailed and prescribe safety standards for a wide range of relevant operational matters. Details of the amendments are set out in Appendix 2.

Legislation Act 2003

Under subsection 8 (4) of the LA, an instrument is a legislative instrument if it is made under a power delegated by the Parliament, and any provision determines the law or alters the content of the law, and it has the direct or indirect effect of affecting a privilege or interest, imposing an obligation, creating a right, or varying or removing an obligation or right. The MOSs satisfy these requirements and, consequentially, the MOS amendments also do so.

Under paragraphs 98 (5A) (a) and (5AA) (a) of the Act, an instrument made under regulations is a legislative instrument if it is issued in relation to matters affecting the safe navigation and operation of aircraft, and is expressed to apply to classes of persons.

On each of these criteria, the MOSs are legislative instruments subject to registration, and tabling and disallowance in the Parliament, under sections 15G, and 38 and 42, of the LA.

Consequentially, the same provisions and conclusions apply to the MOS amendments.

As the instrument relates to aviation safety and is made under CASR, Part 4 of Chapter 3 of the LA (the sunset provisions) does not apply to the instrument (as per item 15 of the table in section 12 of the *Legislation (Exemptions and Other Matters) Regulation 2015*). The instrument deals with aviation safety matters that, once identified, require a risk response or treatment plan. As such, the instrument is intended to have enduring operation and it would not be appropriate for it to be subject to sunset.

The exemption from the sunset provisions affects parliamentary oversight by not requiring the instrument to be remade at the end of the sunset period (remaking would have the effect that the whole instrument must be re-tabled and would become subject to disallowance in the Parliament under sections 38 and 42 of the LA). However, it is likely that, over time, further MOS amendments will be made and these will be subject to tabling and disallowance in the Parliament in the normal way.

Incorporations by reference

Under subsection 98 (5D) of the Act, the MOSs may apply, adopt or incorporate any matter contained in any instrument or other writing. A non-legislative instrument may be incorporated into a legislative instrument made under the Act, as that non-legislative instrument exists or is in force at a particular time or from time to time (including a non-legislative instrument that does not exist when the legislative instrument is made).

Under paragraph 15J (2) (c) of the LA, the Explanatory Statement must contain a description of the incorporated documents and indicate how they may be obtained. A Table was included in the Explanatory Statement for the MOS listing and explaining the various incorporated documents.

The MOS amendment, as such, incorporates the following three further documents.

Document	Description	Manner of incorporation	Source
<i>RTCA DO-275</i>	This document contains Minimum Operational Performance Standards (MOPS) for the aviation night vision imaging system (<i>NVIS</i>) used to supplement night VFR operations. NVIS consists of the night vision goggle (<i>NVG</i>), interior and exterior lighting, cockpit transparencies and crew station design and components. Performance and test procedures are provided for the NVG and lighting. Various provisions of the MOS call up this document.	As in force from time to time	This document is publicly available but subject to copyright protection. The document may be purchased from RTCA DO-275 . Alternatively, CASA will, by prior arrangement, make CASA's copy available, for in-situ viewing, free of charge, at any office of CASA.
MIL-STD-3009, Lighting, Aircraft, NVIS Compatible, of the US Department of Defense	This document provides the interface requirements and testing methodology to ensure compatible and standardized aircraft interior lighting for NVIS compatibility. Various provisions of the MOS call up this document.	As in force from time to time	Various versions of this document are available for free from the following website: MIL-STD-3009 .

Document	Description	Manner of incorporation	Source
Airworthiness Bulletin 25-022 – <i>Incendiary Dispensing Device</i>	<p>This document provides guidance on design considerations for incendiary dispensing devices carried in aircraft for aerial fire fighting.</p> <p>This document is called up in section 22.09 of the Part 138 MOS.</p>	As in force from time to time	<p>Various versions of this document are available for free from the CASA website: AWB 25-022.</p>

The document RTCA DO-275 mentioned above that is subject to copyright is a commercial product for which there is a cost. However, this cost is not considered to be unreasonably onerous for operators to whom it is most relevant. Nevertheless, it does involve a modest impost for some others, although academic and other researchers may obtain free access through university library subscriptions.

CASA has no effective control over the product costs, and it is considered extremely unlikely that the relevant owner of the intellectual property in the documents would sell CASA the copyright at a price that would be an effective and efficient use of CASA's appropriated funds or would otherwise permit CASA to make the document freely available.

CASA has incorporated this document in the instrument because, under the Chicago Convention, it is appropriate and necessary to modernise the safety regulatory scheme in the Part 138 MOS, and because no other similar document that serves the same aviation safety purpose is freely available.

CASA has noted the views of the former Senate Standing Committee on Regulations and Ordinances (in its report *Parliamentary scrutiny of delegated legislation*, tabled out of session on 3 June 2019) that:

The incorporation of material by reference (particularly where that material is not publicly available) has been a longstanding concern for the committee. [para 3.65]

and:

The committee appreciates that it may in some cases be costly to provide free, public access to all incorporated Australian and international standards. Nevertheless, the committee reiterates that one of its core functions is to ensure that all persons subject to or interested in the law may readily and freely access its terms. It intends to continue to monitor this issue. Any justification for a failure to provide for public access to incorporated documents, and any action the committee takes in relation to this matter, will be determined on a case-by-case basis. [para 3.75]

CASA appreciates the Committee's concern, which remains a concern of the Senate Standing Committee for the Scrutiny of Legislation, and to mitigate the situation, as far as currently practicable, proposes that where an incorporated document is copyright and not otherwise freely available to the general public, but is available to CASA as a licenced subscriber, CASA will, by prior arrangement, make CASA's copy available, for in situ viewing, free of charge, at any office of CASA.

Consultation

CASA has developed the MOS amendments for NVIS over a lengthy period of time, including consultation with the Aviation Safety Advisory Panel (*ASAP*), its NVIS Technical Working Group (*TWG*) and the wider aviation community.

In June 2021, the NVIS TWG first convened to evaluate the proposed relocation of NVIS rules from CAO 82.6 into the MOSs. Another TWG meeting was held in August 2021, leading to CASA engaging in public consultation on the proposals from 1 to 29 October 2021, through the release of a Summary of Proposed Changes outlining the proposed amendments to Parts 91, 133 and 138 of CASR and the proposed MOS standards. The consultation received 2 responses.

In November 2021, the TWG reconvened to review and discuss CASA's response to the feedback received during public consultation and provided their final recommendations to the ASAP. Based on these recommendations the ASAP endorsed the proposals.

Regulation Impact Statement

Regulation Impact Statements (*RISs*) were prepared by CASA for the Parts 91, 133 and 138 regulations and these RISs also covered the MOS and the MOS amendment which the regulations empowered. The RISs were assessed by the Office of Best Practice Regulation (*OBPR*) as compliant with the Best Practice Regulation requirements and contained a level of analysis commensurate with the likely impacts. A copy of the relevant RIS was included in the Explanatory Statement for the new regulations, as follows:

- Part 91 RIS (OBPR id: 23625):
<https://www.legislation.gov.au/Details/F2018L01783/Download>
- Part 133 RIS (OBPR ID: 24505):
<https://www.legislation.gov.au/Details/F2018L01788/Download>
- Part 138 RIS (OBPR id: 24505):
<https://www.legislation.gov.au/Details/F2018L01789/Download>.

Statement of Compatibility with Human Rights

A Statement of Compatibility with Human Rights is at Appendix 1. This concludes that the instrument is compatible with human rights and, to the extent that it may also limit human rights in some particular respects, those limitations are reasonable, necessary and proportionate to ensure the safety of aviation operations and to promote the integrity of the aviation safety system.

Commencement and making

The MOS amendments commence immediately after the commencement of Parts 91, 133 and 138 of CASR and their associated MOSs, on 2 December 2021. The empowerment for the MOS amendments, contained in Parts 91, 133 and 138 in relation to regulations 91.040, 133.020 and 138.020, had not commenced when the MOS amendments were made. However, this is permitted under section 4 of the AIA which authorises the anticipatory making of a subordinate instrument in these circumstances, provided the instrument does not commence until (or after) the delayed empowering instrument has itself commenced.

The MOS amendments have been made by the Director of Aviation Safety, on behalf of CASA, in accordance with subsection 73 (2) of the Act.

Statement of Compatibility with Human Rights

*Prepared in accordance with Part 3 of the
Human Rights (Parliamentary Scrutiny) Act 2011*

Part 91, Part 133 and Part 138 Manuals of Standards — NVIS Amendments Instrument 2021 (No. 1)

This legislative instrument is compatible with the human rights and freedoms recognised or declared in the international instruments listed in section 3 of the *Human Rights (Parliamentary Scrutiny) Act 2011*.

Overview of the legislative instrument

The *Part 91, Part 133 and Part 138 Manuals of Standards — NVIS Amendments Instrument 2021 (No. 1)* (the **MOS amendments**) amends:

- the *Part 91 (General Operating and Flight Rules) Manual of Standards 2020*
- the *Part 133 (Australian Air Transport Operation—Rotorcraft) Manual of Standards 2020*
- the *Part 138 (Aerial Work Operations) Manual of Standards 2020* (the **MOSs**).

The purpose of the MOS amendments is to embody in each of the MOSs, the previously applicable requirements for the use of a night vision imaging system (**NVIS**). These requirements were contained in *Civil Aviation Order 82.6 (Night vision imaging system — helicopters) 2007 (CAO 82.6)* which was repealed on 2 December 2021.

CAO 82.6 established operational and airworthiness standards and approval requirements for the use of night vision goggles (**NVG**) in specialised helicopter aerial work operations. CAO 82.6 operated essentially as a set of conditions on Air Operator Certificates (**AOCs**). It had the effect of rendering an AOC holder in breach of their AOC conditions if they made any unapproved use of NVG as a primary means of terrain avoidance for safe air navigation by means of visual surface reference external to an aircraft. The use of an NVIS in private operations was prohibited by CASA under instrument *CASA 288/07 – Direction – use of night vision devices prohibited in private operations*. These measures were necessary to regulate the safe use of an NVIS in the absence of an otherwise express statutory power. The express statutory powers to regulate the use of an NVIS are now contained in the legislation mentioned below.

Using these powers, CASA has amended the MOSs to re-express and modify the previous NVIS requirements, and tailor them for the specific operating environments now regulated by Part 91, Part 133 or Part 138 of CASR.

Human rights implications

Insofar as the MOS amendments are a modified re-embodiment of existing NVIS-use rules as they were in force under CAO 82.6 immediately before 2 December 2021, they do not give rise to any new issues, concerns or engagements with human rights.

However, it may be said that, of their very nature in addressing aviation safety issues, the provisions in the MOS amendments continue to engage the following human rights:

- the right to life under Article 6 of the International Covenant on Civil and Political Rights (the *ICCPR*)
- the right to work under Article 6 (1) and the right to safe and healthy working conditions under Article 7 of the International Covenant on Economic, Social and Cultural Rights (the *ICESCR*).

Right to life under the ICCPR

Right to safe and healthy working conditions under the ICESCR

The MOS amendments may engage these rights. This engagement is in the context of CASA's statutory purpose. The aim of CASA and its regulatory framework and its related MOS, is to uphold aviation safety by prescribing the conduct of individuals and organisations involved in operations requiring NVIS. It is, therefore, a threshold requirement for all CASA legislative instruments that they preserve, promote and enhance aviation safety. Insofar as the MOS amendments are intended, as far as practicable, to promote and enhance aviation safety standards in relation to the use of an NVIS, they promote the right to life under Article 6 of the ICCPR by legislating for safer conditions that will minimise the risk of accidents and prevent accidental death. Thus, for Article 7 of the ICESCR, the MOS amendments also promote the right to safe and healthy working conditions for all pilots, flight crew and other people associated with NVIS operations.

Right to work

The MOS may engage the right to work that is protected under Article 6 (1) of the ICESCR. This right includes the right of everyone to the opportunity to gain their living by work which they freely choose or accept.

The right to work may be engaged by prescribing requirements for qualifications, training and aeronautical experience, as appropriate, for NVIS crew members. The right may be engaged by the MOS amendments to Chapter 17 of the Part 138 MOS, which prescribes the minimum crew composition requirements for an operation involving NVIS fire mapping. The same right may be engaged by the MOS amendments to Chapter 16 of the Part 138 MOS, which prescribes the minimum crew composition requirements for operations involving NVIS firebombing or NVIS incendiary dropping.

Additionally, numerous provisions of the MOS amendments may have an impact on the way that the work involved in safely operating an aircraft is carried out. Many obligations of care, skill, technique and procedure are imposed on pilots to this end. Failure to follow the relevant requirements of the MOS when flying an aircraft could result in the loss of a licence or the loss of continued employment. However, in the interests of aviation safety, it is necessary that pilots follow the flying rules.

These various requirements may, theoretically, impede the right to work. The right of relevant persons to the opportunity to gain their living by work is recognised and that right would be lost if the person fails to obtain the qualifications and competence necessary to safely carry out their aviation safety responsibilities.

Despite the potential engagement with the right to work outlined above, in the interests of aviation safety, it is necessary that persons performing the relevant functions hold the highest reasonable standard of competency and proficiency, and that they are sufficiently trained, qualified and experienced to achieve the safety outcome of their position. The limitations embody safe-use criteria that are necessary to preserve life in face of the risks associated with aerial work operations. They, therefore, contribute to the interests of aviation safety. Therefore, in the

circumstances, the requirements themselves are a reasonable, necessary and proportionate requirement under aviation safety law to ensure aviation safety.

Accordingly, any potential limitation on the right to work is itself necessary, reasonable and proportionate in achieving the aim of protecting and improving aviation safety consistent with the objects of the Act and the regulations.

Conclusion

The MOS amendments is a legislative instrument that is compatible with human rights and, to the extent that it may also limit human rights, those limitations are reasonable, necessary and proportionate to ensure the safety and of the integrity of the aviation safety system which all aviation operations rely.

Details of the *Part 91, Part 133 and Part 138 Manuals of Standards — NVIS Amendments Instrument 2021 (No. 1)*

1 Name of instrument

This section provides for the naming of the *Part 91, Part 133 and Part 138 Manuals of Standards — NVIS Amendments Instrument 2021 (No. 1)* (the **MOS amendments**).

2 Commencement

This section provides for the commencement of the MOS amendments on 2 December 2021.

3 Amendment of Part 91 Manual of Standards

This section provides that Schedule 1 amends the *Part 91 (General Operating and Flight Rules) Manual of Standards 2020*.

4 Amendment of Part 133 Manual of Standards

This section provides that Schedule 2 amends the *Part 133 (Australian Air Transport Operations—Rotorcraft) Manual of Standards 2020*.

5 Amendment of Part 138 Manual of Standards

This section provides that Schedule 3 amends *Part 138 (Aerial Work Operations) Manual of Standards 2020*.

Schedule 1 NVIS Amendments — Part 91 MOS

[1] Subsection 1.07 (6), Definitions and abbreviations

Item 1 inserts new definitions to the MOS.

[2] Section 2.07, Table 2.07 (3), item 2

Item 2 inserts additional requirements into Table 2.07 (3) to set out the variables to determine the VMC criteria and operational requirements applicable to an NVIS operation.

[3] After Table 2.07 (3), including the Notes

Item 3 provides the operational conditions that a NVIS flight must comply with to meet the requirements sets out in items 2A and 2B of Table 2.07 (3).

[4] After subsection 2.07 (4)

Item 4 prescribes when VMC criteria do not apply to the pilot in command of a rotorcraft conducting an NVIS operation.

[5] Chapter 3, NVIS Flights

Item 5 repeals the current Chapter 3 in the Part 91 MOS and inserts a new Chapter 3. The new Chapter 3 provides much more detailed requirements and consists of a number of Divisions and sections.

Division 1 — Purpose, application and definitions

This Division provides:

- that the purpose of this Chapter is to prescribe requirements relating to an NVIS flight (section 3.01)

- the circumstances in which this Chapter applies to the use of an NVIS (section 3.01A)
- the definitions for this Chapter and Division 26.17, taken from CAO 82.6 (section 3.02). These include, in particular, a new definition of an *NVIS operation* for the purposes of operations to which the Part 91 MOS applies that are not air transport or aerial work operations, nor purely private operations and no more.

Division 2 — Requirements for an NVIS flight

This Division provides requirements for an NVIS flight, including:

- general requirements relating to take-off and landing standards, and the persons who can use NVIS in an NVIS flight (section 3.03)
- the requirements that a helicopter landing site (*HLS*) must meet to be an HLS-NVIS standard (section 3.04)
- a requirement that a rotorcraft for an NVIS flight must not land on, or take off from, an HLS-NVIS basic unless it is conducting an NVIS operation, and what the minimum NVIS crew requirements are (section 3.05)
- a requirement that an NVIS flight must not engage in formation flight with another aircraft (section 3.06)
- requirements for alternate aerodrome lighting and the circumstances in which an NVIS flight must nominate a destination alternate aerodrome with appropriate lighting for the runway or HLS (section 3.07).

Division 3 — Additional requirements for NVIS operations

This Division provides additional requirements for an NVIS operation, including:

- requirements for when the optimum performance of the NVIS is affected, or likely to be affected, by the aircraft's exterior lighting, including the circumstances in which an aircraft's exterior lighting can be turned off and when the NVIS operation must be ceased (section 3.08)
- minimum height rules under the NVFR or IFR for NVIS operations and associated conditions, for example, the circumstances in which, if the NVIS is degraded because of extensive illumination in the area being overflown, degogging is permitted (section 3.09)
- minimum in-flight cloud requirements for different kinds of NVIS flights and aircraft (section 3.10).

[6] After section 26.73

Item 6 inserts a new Division 26.17 to the MOS.

Division 26.17 — Equipment for NVIS flights

This Division provides:

- that the purpose of this Division is to prescribe requirements relating to the fitment, non-fitment, and carriage of NVIS equipment on an aircraft (section 26.74)
- the circumstances in which this Division applies to the use of an NVIS (section 26.74A)
- particular definitions for this Division (section 26.75)
- general aircraft and lighting standards for NVIS flights (section 26.76)
- detailed performance specifications and requirements for NVG image intensifier tubes (section 26.77)
- requirements for the maintenance of NVIS equipment (section 26.78)
- minimum equipment to be fitted to an aircraft for NVIS flight and the performance requirements for such equipment (section 26.79).

Schedule 2 NVIS Amendments — Part 133 MOS

[1] Subsection 1.04 (2), Definitions and abbreviations

Item 1 inserts a new definition for *NVIS operation* to the MOS.

[2] Paragraph 5.10 (3) (i)

Item 2 removes the requirement for rotorcraft night operations using NVIS to be conducted in accordance with CAO 82.6. Instead, the flight must be conducted in accordance with the requirements under the MOS for an NVIS operation.

[3] After Chapter 7

Item 3 inserts a new Chapter 7A – Head-up display, enhanced vision system, and synthetic vision system. Chapter 7A is reserved for future use to preserve the MOS structure for any future provisions that would be appropriate following consultation.

[4] Chapter 8

Item 4 repeals the current Chapter 8 in the MOS and inserts a new Chapter 8. The new Chapter 8 provides much more detailed requirements and consists of a number of Divisions and sections.

Division 1 — Purpose, application and definitions

This Division provides:

- that the purpose of this Chapter is to prescribe requirements for the use of an NVIS for a flight of a rotorcraft (section 8.01)
- the circumstances in which this Chapter applies to the use of an NVIS (section 8.01A)
- the definitions for this Chapter (section 8.02), in particular that *NVIS operation* means an NVIS flight that is a medical transport operation, which is the relevant NVIS context for NVIS use below prescribed minimum heights under Part 133.

Division 2 — Requirements for an NVIS flight

This Division provides requirements for an NVIS flight, including:

- general requirements relating to take-off and landing standards, and the persons who can use NVIS in an NVIS flight (section 8.03)
- the requirements that an HLS must meet to be an HLS-NVIS standard (section 8.04)
- a requirement that a rotorcraft for an NVIS flight must not land on, or take off from, an HLS-NVIS basic unless it is conducting an NVIS operation, and what the minimum NVIS crew requirements are (section 8.05)
- a requirement that an NVIS flight must not engage in formation flight with another aircraft (section 8.06)
- requirements for alternate aerodrome lighting and the circumstances in which an NVIS flight must nominate a destination alternate aerodrome with appropriate lighting for the runway or HLS (section 8.07).

Division 3 — Additional requirements for NVIS operations

This Division provides additional requirements for an NVIS operation, including:

- requirements for when the optimum performance of the NVIS is affected or likely to be affected by the rotorcraft's exterior lighting, including the circumstances in which a rotorcraft's exterior lighting can be turned off and when the NVIS operation must be ceased (section 8.08)
- minimum height rules under the NVFR or IFR for NVIS operations and associated conditions, for example, the circumstances in which, if the NVIS is degraded

because of extensive illumination in the area being overflown, degogging is permitted (section 8.09)

- minimum in-flight cloud requirements for different kinds of NVIS flights and rotorcraft (section 8.10).

[5] Paragraph 10.32 (6) (b)

Item 5 corrects an editorial error in technical language.

[6] Paragraph 10.32 (6) (e)

Item 6 corrects an editorial error in technical language.

[7] After section 11.58

Item 7 inserts a new Division 14 – Equipment for NVIS flights to the MOS.

Division 14 — Equipment for NVIS flights

This Division provides:

- that the purpose of this Division is to prescribe requirements relating to the fitment, non-fitment, and carriage of NVIS equipment on a rotorcraft (section 11.59)
- the circumstances in which this Division applies to the use of an NVIS (section 11.59A)
- the definitions for this Division (section 11.60)
- general aircraft and lighting standards for NVIS flights (section 11.61)
- detailed performance specifications and requirements for NVG image intensifier tubes (section 11.62)
- requirements for the maintenance of NVIS equipment (section 11.63)
- minimum equipment to be fitted to an aircraft for NVIS flight and the performance requirements for such equipment (section 11.64).

Schedule 3 NVIS Amendments — Part 138 MOS

[1] Section 1.04, Definitions etc.

Item 1 adds new definitions to the MOS.

[2] Section 1.04, Definitions etc., definition of CAO 82.6

Item 2 repeals the redundant definition of *CAO 82.6*.

[3] Section 1.04, Definitions etc., definition of NVIS operation

Item 3 inserts a new definition for *NVIS operation* to the MOS (see Chapter 12).

[4] Section 1.04, Definitions etc., definition of NVIS qualified crew

Item 4 repeals the redundant definition of *NVIS qualified crew*.

[5] Paragraph 9.02 (2) (b)

Item 5 repeals the minimum height requirements for a positioning flight using NVIS under CAO 82.6. Instead, the flight must be conducted in accordance with the minimum height requirements under regulation 91.265 or 91.267.

[6] Paragraph 9.04 (2) (h)

Item 6 repeals the requirement for a rotorcraft operated under the IFR or a VFR flight at night below minimum height to be operated using an NVIS with NVIS qualified crew in accordance with CAO 82.6. Instead, the flight must be conducted in accordance with the requirements for an NVIS operation.

[7] After subsection 9.14 (3)

Item 7 provides that an IFR flight involving an emergency services operation search and rescue (ESO SAR) auto-hover using transition mode capability over the sea may be conducted using NVIS in accordance with Chapter 12 of the MOS.

[8] Subsections 11.01 (2) and (3)

Item 8 repeals the requirement for an aerial work certificate holder to comply with CAO 82.6 when conducting an NVIS operation involving the carriage of aerial work passengers or aerial work cargo.

[9] Subparagraph 11.03 (1) (d) (i)

Item 9 repeals the requirement for a single-engine rotorcraft to be equipped for an NVIS operation with an NVIS qualified crew using NVIS in accordance with CAO 82.6 if up to 2 aerial work passengers are to be carried in a VFR flight at night. Instead, the flight must be conducted in accordance with the requirements for an NVIS operation.

[10] Subparagraph 11.03 (1) (d) (ii)

Item 10 repeals the requirement, if up to 2 aerial work passengers are to be carried in a VFR flight at night, for the rotorcraft operator to be authorised for NVIS operations in accordance with CAO 82.6.

[11] Sections 12.01 and 12.02

Item 11 repeals the content of the current Chapter 12 and inserts new content. The new content of Chapter 12 provides much more detailed requirements and consists of a number of Divisions and sections.

Division 1 — Purpose, application and definitions

This Division provides:

- that the purpose of this Chapter is to prescribe requirements relating to an NVIS flight (section 12.01)
- the circumstances in which this Chapter applies to the use of an NVIS (section 12.02)
- the definitions for this Chapter (section 12.03).

Division 2 — Requirements for NVIS operations

This Division provides requirements for an NVIS operation, including:

- general requirements relating to take-off and landing standards (section 12.04)
- the requirements that an HLS must meet to be an HLS-NVIS standard (section 12.05)
- the circumstances in which a rotorcraft for an NVIS operation may land on, or take off from, an HLS-NVIS basic (section 12.06)
- that an aircraft for an NVIS operation must not engage in formation flight with another aircraft (section 12.07)
- the circumstances in which an NVIS operation must nominate a destination alternate aerodrome with lighting for the runway or HLS (section 12.08)
- requirements when the optimum performance of the NVIS is affected, or likely to be affected, by the aircraft's exterior lighting, including the circumstances in which an aircraft's exterior lighting can be turned off and the NVIS operation must be ceased (section 12.09)
- requirements relating to NVIS crew members, and requirements for operations below nominated elevations and when degogging is permitted (section 12.10)
- minimum in-flight cloud requirements for different kinds of NVIS flights and aircraft (section 12.11).

[12] Paragraph 15.08 (3) (b)

Item 12 repeals the reference to CAO 82.6. Instead, external objects are visible if they are visible through an NVIS and the flight is conducted in accordance with the requirements for an NVIS operation.

[13] Paragraphs 15.11 (a) and (b)

Item 13 clarifies how a rotorcraft of an aerial work certificate holder conducting an external load operation at night over water must be equipped, including requiring compliance with Chapter 26 of the Part 91 MOS for rotorcraft IFR flight with lighting as specified under section 22.07 as if it applied to the operation. The item repeals reference to CAO 82.6.

[14] Section 16.01

Item 14 creates a new Division 1 – Preliminary to accommodate the inclusion of the NVIS firebombing, NVIS incendiary dropping and NVIS fire mapping requirements.

[15] After section 16.03

Item 15 creates a new Division 2 – NVIS firebombing and new Division 3 – NVIS incendiary dropping. The new Divisions provide detailed requirements and consist of a number of sections.

Division 2 — NVIS firebombing

This Division provides:

- that this Division applies to an NVIS operator, and the pilot in command of the operator's aircraft, when engaged in NVIS firebombing (section 16.04)
- an obligation for the NVIS operator and pilot in command to comply with the requirements of this Division, and sets out the circumstances in which an aeroplane may be used in NVIS firebombing below the prescribed height (section 16.05)
- the minimum crew requirements, including qualifications and aeronautical experience (section 16.06)
- where and how an aircraft belly tank may be filled or refilled (section 16.07).

Division 3 — NVIS incendiary dropping

This Division provides:

- that this Division applies to an NVIS operator, and the pilot in command of the operator's aircraft, when engaged in NVIS incendiary dropping (section 16.08)
- an obligation for the NVIS operator and pilot in command to comply with the requirements of this Division (section 16.09)
- the minimum crew composition requirements (section 16.10).

[16] After section 17.09

Item 16 creates a new Division 4 – NVIS fire mapping. The new Division provides detailed requirements and consists of a number of sections.

Division 4 — NVIS fire mapping

This Division provides:

- that this Division applies to an NVIS operator, and the pilot in command of the operator's aircraft, when engaged in NVIS fire mapping (section 17.10)
- an obligation for the NVIS operator and pilot in command to comply with the requirements of this Division (section 17.11)
- the minimum crew composition requirements (section 17.12).

[17] Subsection 22.07 (4), the Note

Item 17 removes reference to CAO.6.

[18] After section 22.08 (new section 22.09)

Item 18 inserts the minimum equipment requirements that an aircraft must be equipped with to conduct NVIS incendiary dropping, NVIS fire mapping or NVIS firebombing.