

# **TRAINING MANUAL**



## **TYPE RATING Airbus 340**

## 1. A THE TRAINING PLAN

### 1.1 THE AIM OF THE COURSE

The aim of the A340 Type Rating course is to give the students enough knowledge and skill to carry out the tasks required by a A340 pilot as Airbus Standard Training Manuals (FCOM, FCTM etc).

### 1.2 PRE-ENTRY REQUIREMENTS

An applicant for the A340 Type Rating course shall have at least:

- ATPL theory
- Commercial Pilot License with at least 70h PIC
- Multi-Engine Instrument Rating
- Multi-Crew Co-operation (MCC) or have experience of at least 500 hours as pilot in multi-pilot operations in accordance with PART-FCL.
- ICAO English proficiency level minimum 4
- Advanced UPRT

### 1.3 CREDITS FOR PREVIOUS EXPERIENCE

During aircraft training, the student may be credited 2 touch and go landings based on previous experience. If the student has more than 500 hours of MPA on aircraft of similar size and performance. Stolflight only accept Airbus A320, A330 and 350 as similar in according to OSD 3.2.

The required 6 touch and go landing, with Go-Around with 1 full stop included, may be reduced to 4 touch and go landing with Go-Around and 1 full stop included.

CCQ (Cross qualification courses) A340 are designed for pilots qualified and current with minimum of 3 months and 150 flying hours on the base aircraft.

Note: In the sentence above, Base Aircraft is either A320 or A330.

For renewal training see Refresher Training Manual.

### 1.4 TRAINING SYLLABI

The training program is divided in 3 sections:

- Theoretical Training
- Flight Training
- Aircraft Training

For Type Rating, the overall course duration is 6 weeks and consists of 76 hours of theoretical training including exams, 16 hours of procedure training using APT and 36 hours (34 hours if only 1 applicant during skill test) of FFS including skill test.

Type rating is completed with Aircraft training.

For CCQ from A320 to A340, the training includes approx. 20 hours of theoretical training, 12 hours of simulator training and 4 hours of skill testing.

For CCQ from A330 to A340, the training includes approx. 10 hours of theoretical training, 4 hours of simulator training and 4 hours of skill testing.

For CCQ, the training is completed either with a session in simulator for ZFTT or Aircraft training.

Stoflight offers initial typeration on the A340/300 variant and CCQ on both A340/300 and 600

### 1.4.1 THEORETICAL TRAINING

The theoretical phase is the first part of the A340 Type Rating course. It covers all theoretical instruction including examination. The theoretical training comprises for Type rating course 76 hours divided between self-study/CBT and classroom teaching and for CCQ 8-18h CBT.

TOPIC DESCRIPTION
Safety Introduction Course
Introduction Training Course
Computer Based Training Self-study
Instruction Aircraft System Knowledge in classroom
Study Review in classroom
Aircraft System Knowledge Exam
Classroom Instruction Flight Performance & Planning Part 1 & 2
Flight Performance & Planning Exam
UPRT

The time distribution and lesson content can be found in chapter 4.

### 1.4.2 SYNTHETIC FLIGHT TRAINING TYPE RATING (ref OSD app.6)

This phase focuses on the flight training exercises including the 16 hours of procedure training performed on other training devices (APT). This phase takes approximately 3 weeks to complete with rest periods included. UPRT part of the training is carried out on FFS approved for UPRT (See OM 5.14 ).

TOPIC DESCRIPTION	DURATION
Other Training Devices (APT) Normal Procedures	08:00 hours
Full Flight Simulator (FFS) Normal Procedures	12:00 hours
Other Training Devices (APT) Non-Normal Procedures	08:00 hours
Full Flight Simulator (FFS) Non-Normal Procedures	16:00 hours
Full Flight Simulator (FFS) LOFT	04:00 hours
Full Flight Simulator (FFS) Skill test	04:00 hours
Full Flight Simulator (FFS) ZFTT	02:00 hours
<b>Total</b>	<b>54:00 hours</b>

ZFTT should be carried out in a LEVEL D approved simulator.

1.4.3 SYNTHETIC FLIGHT TRAINING CCQ A320-A340 (ref OSD app.7)

This training focuses on the differences between the Airbus 320 and the Airbus 340. The training covers about 20 hours and is completed in about 1.5 weeks.

TOPIC DESCRIPTION	DURATION
CCQ Full Flight Simulator training	12:00 hours
CCQ Full Flight Simulator – Skill test	4:00 hours
CCQ Full Flight simulator-ZFTT	2:00 hours
Or Base training in Aircraft 4 take offs and Landings or 6 Take-offs and landings depending on experience.	Or 2:00 hours
<b>Total</b>	<b>18:00 hours</b>

1.4.4 SYNTHETIC FLIGHT TRAINING CCQ A330-A340 (ref OSD app.8)

This training focuses on the differences between the Airbus 330 and the Airbus 340. The training covers about 10 hours and is completed in about 4 days.

TOPIC DESCRIPTION	DURATION
CCQ Full Flight Simulator training	4:00 hours
CCQ Full Flight Simulator – Skill test	4:00 hours
CCQ Full Flight simulator-ZFTT	2:00 hours
Or Base training in Aircraft 4 take offs and Landings or 6 Take-offs and landings depending on experience.	Or 2:00 hours
<b>Total</b>	<b>10:00 hours</b>

1.4.5 AIRCRAFT TRAINING

After a successful pass in the Skill Test, the student will then complete the Landing Training in the aircraft. This is performed with a subcontractor and will be according OSD.

Landing Training on the A340 will as a minimum consist of six take-offs and landings, including a Go-Around from landing configuration, if the student complies with 1.3 it can be reduced to 4 take- offs and landings.

This Aircraft training can be substituted by ZFTT in an FTD. Followed by line training at affiliated and approved Airlines.

TOPIC DESCRIPTION	DURATION
Safety Briefing	01:00 hour
Walk around- PFI	01:00 hour
Touch & Go Landings, Go-Around, Full-stop Landing	02:00 hours
<b>Total</b>	<b>04:00 hour</b>

1.4.6 TASE

The training program is compliant with the Training Area of Emphasis (TASE). TASE's will be highlighted in red.

## 1.5 THE TIME SCALE

The time scale for the A340 Type Rating course is illustrated graphically below. The course duration is approximately 6 weeks.

PHASE	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
Theoretical						
Flight						
Aircraft						

## 1.6 TRAINING PROGRAM

### 1.6.1 Daily operations

The school's general structure and operations are described in OM chapter 1.

### 1.6.2 Bad weather constraint

Weather minima for flight training are described in OM chapter 3.4

### 1.6.3 Duty and rest

Rules for scheduling and rest time are described in OM chapters 1.14-1.17

## 1.7 TRAINING RECORDS

### 1.7.1 GENERAL

Training records are kept and stored according to the Stoflight retention of documents procedure found in OM 1.11.

Stoport has been designed in such way that should the system for any reason be unavailable, the training can be conducted using this manual's attached training forms and later be uploaded to Stoport.

The actual written exams are not required to be stored if the result has been entered into the student folder and saved in Stoport.

### 1.7.2 ATTENDANCE RECORDS

The instructor is responsible for filling the student attendance record using Stoport. After completion of each session, the instructor will complete the session using Stoport. The system will give the option of "Attended, didn't attend or Attended partially with the option of choosing for example if the student came late". This will then be kept in the student folder of that specific user. The theory attendance can be viewed under each student folder -> theory, with absence report that gives a percentage of the attendance per subject and overall attendance.

### 1.7.3 STANDARDIZATION OF ENTRIES IN TRAINING RECORDS

The instructor is responsible for all entries in the student folder. Before the skill test, the HT must check the student folder containing all training records and sign the skill test release form, to release the student for skill test.

To ensure standardization of entries in training records, Stoflight will provide related training to all instructors during the initial and refresher instructor training. The student can't make any entries in the student folder except to review his or her sessions and formally accept the feedback of each session by a digital "acceptance".

#### 1.7.4 RULES CONCERNING LOG BOOK ENTRIES

The TRI or SFI may sign the student log book after completion of the simulator training. The TRI employed by the subcontractor may sign the student log book after completion of the aircraft training.

1.7.5 TRAINING RECORD SHEET

TRAINING RECORDS		
<b>STUDENT NAME</b>		<b>START DATE</b>
SAFETY TRAINING PERFORMED ON .....		<b>RANK</b>
Student sign .....		F/O <input type="checkbox"/>
Instructor sign .....		CAPT <input type="checkbox"/>

TK #	Date	Check in / out	Time	Total	Student sign	Instructor sign

THEORETICAL KNOWLEDGE EXAMINATION RESULTS	
<b>COURSE</b>	<b>RESULT</b>
Aircraft System Knowledge	
Flight Performance & Planning	
Student sign .....	Instructor sign .....
	Passed <input type="checkbox"/>

Bottom of Form

APT #	Date	Check in / out	Time	Total	Student sign	Instructor sign

FFS #	Date	Check in / out	Time	Total	Student sign	Instructor sign

FINAL CHECKS	
<b>CHECK TYPE</b>	<b>HT/Exam Sign</b>
Student has successfully completed FFS 8 and now released for skill test.	
Student has successfully passed the skill test.	
Student has successfully completed ZFTT training if not aircraft training substitutes. See below.	
Student has successfully completed aircraft training.	
Student has successfully completed the A340 Type Rating	

## 1.8 SAFETY TRAINING

The safety training can be found in OM 1.20, which describes:

- Theoretical training
- Simulator training
- Aircraft training

It is the responsibility of the instructor to ensure that the student has received and understood the safety training by signing the student safety training form appendix to SMM. However, before released for skill test, the CFI(MP) or HT must confirm the student's safety training, by checking the student folder, before releasing him or her for skill test.

## 1.9 TESTS AND EXAMINATIONS

### 1.9.1 GENERAL

The student will be tested several times during the training period, both written exams as well as checks during simulator training. Before releasing a student for an examination (written and practical), the responsible manager, CFI(MP) must be informed.

Should a student fail any exam, extra training shall be provided as necessary. The responsible instructor in cooperation with CFI(MP) and or HT will decide the necessary training required.

All final tests and exams shall be entered into the student folder by the responsible instructor.

### 1.9.2 PROGRESS TEST (theoretical)

The Computer Based Training (CBT) includes a progress test after completion of each chapter. Each CBT-based progress test must be completed with a pass rate of 100% before continuing the studies. The CBT is designed in such way that it will help the student to receive 100% test result by providing information on the wrong answers and allow the student to re-try the progress test. The responsible instructor shall at least once a week, check the student's progress.

### 1.9.3 THEORETICAL EXAMINATION

The student will write two exams during the A340 type rating course. The aircraft system knowledge test and the Flight Performance & Planning exam which covers Flight Performance, Flight Planning including Mass & Balance and Limitations. A pass mark of 75% or higher is required for all the theoretical examinations. Should a student fail any exam, he or she must undergo extra training as necessary. The CFI(MP) decides the interval period between the second attempt of written examinations.

### 1.9.4 PROGRESS CHECK (practical)

All students will be checked for progress during the flight training phase, which will be performed during FFS #4 and FFS #8. During normal training the grade tolerance is maximum 1 item below standard (B) and maximum 5 items on hold (H). However, during progress checks, all exercises must be completed to grade standard (S). The following progress check criteria shall be met during the progress checks.

## #FFS 4

- From cold and dark until before start checklist in less than 30 minutes.
- Takeoff rotation shall be done within the correct limit.
- Apply correct crosswind techniques for takeoff and landing.
- Apply correct ECAM procedures. Correct SOPS for 3 D approach.
- At all times maintain aircraft control in a safe manner.
- Perform at least 1 stabilized approach.

## #FFS 8

- Demonstrate good knowledge of aircraft limitations and procedures.
- Applying correct Supplementary Procedures and techniques (read & do).
- Follow ATC and SID with a deviation tolerance of:

Height	± 100 feet
Speed	± 5 kts
Track	± 5°

- Identifying problems and finding correct checklist within reasonable time.
- At all times maintain aircraft control in a safe manner.
- Perform at least 1 stabilized non-precision approach.

Additional to the above-mentioned procedure, the LOFT (session 8) is considered the final progress check and must be completed in full as satisfactory on all items before released for skill test.

For CCQ progress check will be conducted on FFS #3.

Should a student fail a progress check, the instructor shall contact CFI(MP) and/or HT prior to any further training. Stopport will automatically send a notification to CFI(MP) and HT on any lessons failed or marked as repetition needed. A decision if any additional training is required is taken by CFI(MP) or HT in consultancy with the instructor who performed the progress check.

### 1.9.5 PRACTICAL EXAMINATION (SKILL TEST)

The skill test is conducted during FFS session on the same type of simulator as used during the type rating course and performed by an approved examiner. The examiner shall before the skill test, review the student training record. After a successful skill test, the examiner will sign the student skill test release form. Should a student fail a skill test, extra training shall be provided as necessary and as decided by the CFI(MP) or HT. Should the student fail a second attempt, and then Head of Training will decide further actions to be taken. The Examiner may also decide on further training.

## 1.10 TRAINING EFFECTIVENESS

### 1.10.1 GENERAL

The aim is to offer a highly effective training program, and this can be achieved by several procedures, amongst them are the following.

### 1.10.2 INDIVIDUAL RESPONSIBILITIES

The responsibilities of Stoflight personnel are described in OM 1.3.

The student is responsible to:

- be present throughout the course.
- follow the rules and instructions given by Stoflight and its personnel.
- always strive for good performance and good airmanship.

### 1.10.3 LIAISON BETWEEN DEPARTMENTS

Should any problems occur between instructors or students of different departments, the responsible manager of the related department shall be contacted.

CFI(MP) runs the day-to-day operations for the flight training department for multi pilot aircraft training.

HT is responsible for all training departments and ensuring good cooperation between the different departments.

### 1.10.4 IDENTIFICATION OF UNSATISFACTORY PROGRESS

During flight training a maximum of 1 item is allowed to be graded; below required standard (B) per session. Each time an exercise item has been graded B, it will be added to the Subgrades list in Stoport which will leave a digital print of the lesson, exercise, grade and comment. This procedure will allow the instructors to easily see an overview of the student progress, which also gives the instructor a chance to practice that specific item in another lesson should time allow. However, during each progress check, the responsible instructor must verify and check that all subgrades in that phase are up to grade standard (S).

If any lesson is graded with more than 1 exercise item; below standard (B), then repetition training is needed prior to the next lesson.

If Stoport for any reason should be unavailable and unsatisfactory progress has been identified, the instructor must file the Incomplete Item List (IIL), appendix to TM PPL. This report shall be sent to the CFI(MP) and a copy to HT, by e-mail.

During theoretical training, should the instructor identify unsatisfactory progress of a student, he or she shall inform the CFI(MP) and take action on additional training, if necessary. This can be added as a comment to that specific theory lesson, Stoport will automatically notify the necessary personnel.

### 1.10.5 PROCEDURE FOR CHANGING INSTRUCTOR

The CFI(MP) is responsible for the planning of any necessary changes to the schedule. The CFI(MP) shall gather all necessary training records and documents, prepare an easy transaction for the instructor as well as the student. The previous instructor shall contact the new instructor in coordination with the CFI(MP) and brief the new instructor with a general overview and student progress as well as any useful tips. This shall be performed prior to any scheduled training session. The related documents will be sent by the CFI(MP) as stated above or uploaded to the digital online portal, Stoport. The student must be informed prior to any training session with the new instructor.

### 1.10.6 MAXIMUM NUMBER OF INSTRUCTOR CHANGES PER STUDENT

For flight training, Stoflight believes that 2 instructors are optimum for student performance. The maximum number of flight instructor changes per student should not exceed 3.

For theoretical training, Stoflight believes that 2 instructors are optimum for student performance. The maximum number of theoretical instructor changes per student should not exceed 4.

### 1.10.7 INTERNAL FEEDBACK SYSTEM FOR DETECTING TRAINING DEFICIENCIES

The main tool in detecting training deficiencies is our safety & compliance monitoring system, which is the backbone of the quality assurance of Stoflight. Additional to that, Stoflight has implemented an effective detection system for the flight training phase, by checking student progress at least 2 times during the flight training exercises. During the theoretical training, deficiencies are discovered by progress tests. After course completion, an evaluation survey will be sent to all students asking for feedback of the entire course, this is also an important step towards increasing our training standards

### 1.10.8 PROCEDURES FOR SUSPENDING A STUDENT FROM TRAINING

Only the HT has the mandate to suspend a student. The procedure when a student is suspended from training is that, HT shall notify the Authorities. Stoflight shall assist the student with necessary documents upon request (documents shall be directly forwarded to e.g. new training organization). The suspension must be in written and documented according to Stoflight retention of documents procedure (OM 1.11).

### 1.10.9 DISCIPLINE

All students must follow the rules and regulations of Stoflight. He or she is allowed to deviate from instructions given for safety reasons, however should such incident occur, a mandatory Occurrence Report must be filed.

All students must attend classes as given by the training schedule. Should the student feel ill in any way and not medically fit for classroom instruction or flight, he or she must inform Stoflight as soon as possible. The student may request leave of absence, however based on the nature of this training (simulator costs etc.) financial arrangements may be necessary. Absence from a flight lesson will be charged.

### 1.10.10 REPORTING AND DOCUMENTATION

All actions that require intervention from CFI(MP) or HT must be in written and documented according to Stoflight retention of documents procedure (OM 1.11).

Stoflight encourages all students and instructors to report anything they need-feel-to report, e.g. suggestions, complaints, safety issues etc. To file a report, use the OR.

## 1.11 STANDARDS AND LEVEL OF PERFORMANCE AT VARIOUS STAGES

### 1.11.1 INDIVIDUAL RESPONSIBILITIES

HT is responsible for the overall standard of the Type Rating course.  
CFI(MP) is responsible for the flight training and instruction standards.

TRI/SFI /TKI is responsible for the training sessions performed and shall comply with the rules and guidelines laid down in Stoflight Manuals.

Students are responsible to follow the rules and training given by Stoflight. At all times strive for an increasing performance.

### 1.11.2 STANDARDIZATION

Standardization is a key factor to ensure an even distribution of performance amongst instructors and students. With regards to instructor standardization, all new instructors will be given the required training to ensure a high level of standard. This is conducted as a part of the Initial and Refresher Instructor Training (Syllabus described as appendix to OM).

### 1.11.3 STANDARDIZATION REQUIREMENTS AND PROCEDURES

The grading system used for flight exercises is based on alphabetic characters. These grades are applicable per item basis during flight exercises. Stoflight doesn't apply the classical grading method and has therefore implemented a "standard-only" method which means that either the student meets the required standard or does not.

Grading description:

H = Hold item, is not completed (e.g. due to lack of time, weather or other reasons).

B = Item is below required standard.

S = Item is accepted as standard.

All items during the training phase require a minimum of grade standard (S). During each session, a maximum of 1 item below standard (B) grade is allowed and maximum 5 items marked as H, hold item, however, this should be completed at the end of each phase and must be completed before the last session of the A340 TR training syllabi. See A340 TM 1.10.4 for more information.

During the flight training phase, the student will be assessed individually and as a member of a crew (set of 2 pilots). The student shall perform all items during training sessions that require handling skill demonstrated by Pilot Flying as Pilot Flying. Items that require more crew involvement, can be performed by the student as either Pilot Flying or Pilot Monitoring.

### 1.11.4 APPLICATION OF TEST CRITERIA / FLIGHT TEST TOLERANCE

During a skill test, the following criteria shall be met, according to *Part-FCL appendix 9*.

The student shall demonstrate the ability to:

- a) Operate the aircraft within its limitations.
- b) Complete all manoeuvres with smoothness and accuracy.
- c) Exercise good judgement and airmanship.
- d) Apply aeronautical knowledge.
- e) Always maintain control of the aircraft in such a manner that the successful outcome of a procedure or manoeuvre is always assured.
- f) Understand and apply crew coordination and incapacitation procedures, if applicable.
- g) Communicate effectively with the other crew members, if applicable.

The student shall apply the following limits, corrected to make allowance for turbulent conditions and the handling qualities and performance of the aircraft used:

Height

Generally	± 100 feet
Starting a go-around at decision height	+ 50 feet/- 0 feet
Minimum descent height/altitude	+ 50 feet/- 0 feet

Tracking

On radio aids	±5°
For 'angular' deviations	Half-scale deflection, azimuth and glide path (e.g. LPV, ILS, MLS, GLS)
2D (LNAV) and 3D (LNAV/VNAV) 'linear' lateral deviations	cross-track error/deviation shall be limited to ± ½ of the RNP value associated with the procedure. Brief deviations from this standard up to a maximum of one time the RNP value are allowable
3D linear vertical deviations (e.g. RNP APCH (LNAV/VNAV) using BaroVNAV)	not more than - 75 ft below the vertical profile at any time, and not more than + 75 ft above the vertical profile at or below 1 000 ft above aerodrome level.

Heading

All engines operating	± 5°
With simulated engine failure	± 10°

Speed

All engines operating	± 5 knots
With simulated engine failure	+ 10 knots/- 5 knots

## 2. B BRIEFING AND AIR EXERCISES

### 2.1 AIR EXERCISE

The student is required to perform aircraft training to complete the Type Rating course. This training will be performed by and under responsibility of the subcontractor. See OM Part B for more information.

The weather minima during this training can be found in Stoflight OM 3.4.

The aircraft training is the final step in the A340 Type Rating course and can only be performed after completion of all training sessions according to this manual (Part C), and a successful skill test.

2.1.1 AIR EXERCISE – AIRCRAFT TRAINING

<b>COURSE: TYPE RATING AIRBUS 340</b>		<b>AIRCRAFT:</b>		
		<b>AIRPORT:</b>		
ITEM	DESCRIPTION Aircraft Training including Preflight Inspection.	GRADE		
		H	B	S
0.1	Flight Preparations & Planning			
0.2	Walk-Around			
0.3	Safety Equipment - Doors including cargo doors.			
0.4	Safety Equipment - Emergency exit (Slides, Cockpit Escape etc)			
0.5	Safety Equipment - Smoke Protection (Goggles, Blankets etc)			
0.6	Safety Equipment - Fire Protection (Fire extinguisher etc)			
0.7	Other Safety Equipment as necessary _____			
0.8	Other Dispatch items as necessary _____			
0.9	Compliance with Procedures in Flight			
0.10	Taxi (If Applicable)			
0.11	Touch & Go Landings			
0.12	Go-Around			
0.13	Full-stop Landing			
0.14	After Landing / Parking Procedures (If Applicable)			
<b>COMMENTS:</b>				
<b>COMPANY:</b>				
<b>AIRCRAFT REGISTRATION:</b>				
<b>NUMBER OF TOUCH &amp; GO LANDINGS:</b>				
<b>NUMBER OF GO AROUNDS:</b>				
<b>NUMBER OF FULL STOP LANDINGS:</b>				
<b>BLOCK OFF / BLOCK ON:</b>			<b>DATE:</b>	
<b>STUDENT NAME:</b>		<b>SIGNATURE:</b>		
<b>INSTRUCTOR NAME:</b>		<b>SIGNATURE:</b>		

H = Not Completed      B = Below Standard      S = Standard

This form shall be filed by the TRI performing the Air Exercise and once completed, returned back to the student whom shall forward a copy to Stockholm Flight Academy.

**AIRCRAFT TRAINING – LESSON PLAN****LESSON DESCRIPTION**

This training phase is the last step of obtaining the type rating endorsement. This session will be performed in a real aircraft during touch & go operations. The aircraft training will give the student an introduction to the aircraft visual external inspection (walk around), all check-items will be covered. The instructor will then show the necessary emergency procedures and use of emergency equipment.

The actual aircraft training is performed as 6 touch & go landings including 1 full-stop (normally the last landing) and 1 Go-Around. These touch & go's will be performed in a visual traffic circuit normally at 1500ft. The instructor will act as PM and assist with the necessary procedures required to perform the training safely.

This training is usually combined with several pilots in 1 block flight which means that after engine startup, all the onboard pilots (students) will perform the touch & go training before the engines are shut down again.

**LESSON OBJECTIVE**

- Follow all procedures necessary in a safe manner.
- At all times maintain aircraft control in a safe manner.
- Perform 6 touch & go landings (including 1 full stop) and 1 go-around within the stabilized criteria of an approach and with proper landing technique.

**STUDY REFERENCE**

- Visual Traffic Pattern                      FCTM, PR-NP-SP
- Touch and Go Landings                      FCTM, PR-NP-SO, FCL, GM1 App 9 (d), OSD

## 2.2 AIR EXERCISE REFERENCE LIST

The aircraft training is only 1 training session, the rest of the flight training is conducted in the simulator and can be found in this manual (Part C).

### 2.2.1 Go-Around – all engines operating

Go-around with all engines operating from various stages during an instrument approach is carried out if needed according to SOP;s, ref EASA Part FCL, Appendix 9, Section B(5) exercise 7.3; B(6) exercise 4.1.)

- (1) The objective of the go-around exercises is to expose the student pilot to the physiological effects caused by a go-around. The instructor should ensure that student pilots understand the objective of the exercises and provide students with appropriate coping strategies, including TEM. Due consideration should be given to environmental conditions when evaluating the demonstration of task proficiency and related criteria.
- (2) A go-around may be commenced at any time during an approach, including before the aeroplane is in the landing configuration. Historically, most go-around training has been conducted when the aeroplane is in the landing configuration prior to commencing the go-around. Students must be prepared to adapt the go-around manoeuvre if the go-around is commenced prior to the point where the aeroplane is fully configured for landing. Situation awareness in relation to flap and gear configuration, aeroplane speed and missed approach altitude is important.
- (3) Unanticipated go-arounds may startle the students (e.g. unexpected ATC constraints, automation malfunction, adverse weather, etc.). Students may find themselves faced with a situation where they have to perform a large number of critical actions under a high workload (e.g. setting thrust, landing gear retraction, flight path management). The instructor should explain that there is also a possibility of disorientation during a go-around because of the somatogravic effect produced by large longitudinal acceleration felt by the inner-ear as the aeroplane speed increases. This effect cannot be reproduced in an FSTD.
- (4) It is vital that the correct pitch attitude is selected and maintained, while the aeroplane is kept in trim as it accelerates (depending on the aeroplane type). On some aeroplane types with under-slung engines the pitch response with all engines functioning may be amplified due to the relatively low gross weight towards the end of a flight and the high thrust available from modern aeroplane engines. It is particularly important that trim changes are anticipated on such aeroplanes.

## 2.3 COURSE STRUCTURE: PHASE OF TRAINING

After successful completion of the theoretical training, flight training and skill test the aircraft training will be performed. The aircraft training will be provided by a subcontractor and normally takes one day to complete.

The aircraft operator will provide necessary training material which will be used during the aircraft training.

## 2.4 COURSE STRUCTURE: INTEGRATION OF SYLLABI

The knowledge required for the aircraft training has been covered in the theoretical knowledge instruction as well as in flight training. The aircraft training is normally performed as visual circuits and this procedure has been covered in the training syllabi according to the procedures of the manufacturer's flight crew training manual (FCTM) and if necessary, the operator's SOP. This exercise has also been trained in the flight training phase.

## 2.5 STUDENT PROGRESS

This is the final exercise of the Type Rating course. The student, whom will perform the aircraft training must follow the procedures laid down in the operators' FCOM manual. He or she must exercise the highest degree of flight safety and good airmanship. The student is expected to perform take off and landings in a safely manner according to the operators SOP. Should the TRI conducting the aircraft training assess the flight training performance below standard. He or she has been instructed as a part of the subcontractor requirement, to inform Stoflight (normally HT) and write a written report describing the training exercise. This report shall be filed together with an Occurrence Report as a part of Stoflight SMS. It is then the responsibility of HT to decide on further training or other action to be taken.

## 2.6 INSTRUCTIONAL METHODS

The instructor (TRI) is under the responsibility of the operator (subcontractor). Stoflight will throughout the Type Rating exercise and teach CRM and airmanship values.

The instructor (TRI) will be standardized according to STO flight OM 4.4.

## 2.7 PROGRESS CHECK

Due to the nature of this training exercise, the skill test will act as the final progress check of the Type Rating course.

## 3. SYNTHETIC FLIGHT TRAINING

### 3.1 AIR EXERCISE

All the synthetic training exercises will be specified in this part. Each exercise is arranged in the sequence to be trained. Each session is 4 hours. Stoflight has decided to divide the APT sessions based on training activity. The first 2 APT sessions will be performed in the beginning of the course and the second 2 APT sessions, after completion of the third FFS session (FFS #3). The reason for this is to give the students a chance to familiarize themselves with different procedures before training this in the Full Flight Simulator.

The exercises are divided in two categories:

#### Other Training Devices (APT)

These exercises can be conducted in an APT, the purpose of these sessions is to prepare the students for the FFS. Since the FFS sessions are time sensitive, it is important to bring the students up to speed and necessary proficiency before performing FFS sessions. The APT sessions are most effective for familiarization and preparatory purposes.

An APT is defined as the follow (extract from Airbus):

*The APT is a three dimensional (3D) type specific training device providing an open flight deck which replicates the A320 cockpit spatial organization. Cockpit instrumentation is mainly computer generated, with interactive graphics respecting panel size and location which are displayed on multiple touch-sensitive LCD displays. Aircraft equipment requiring intensive manipulation, such as FCU, MCDU, consist of 3D replicated aircraft panels with physical controls, knobs and switches. The device incorporates the necessary malfunctions to accomplish the training of normal, abnormal and emergency procedures. The APT device is configured to permit the incorporation of future updates.*

*An instructor operating station (IOS) is available to allow initialization, the modification of flight and environmental conditions (wind, temperature, pressure, etc.). It permits repositions (in flight and on ground), freezes, system resets, airport selection, aircraft malfunction insertion. Lessons plan are also available. The device is located in a suitable quiet room, free of training distractions, with adequate temperature and lighting conditions.*

If an APP as defined by Airbus is not available, it can be replaced with an FFS in fixed mode.

#### Full Flight Simulator (FFS)

The Full Flight Simulator sessions are the main exercises of this phase of training. They are performed in a full motion simulator.

### 3.2 AIR EXERCISE REFERENCE LIST

#### Type Rating A340

LESSON	REF	LESSON NAME	APT	FFS
1	3.1.1	APT #1 Aircraft familiarization and introduction to Normal Procedures.	x	
2	3.1.2	APT #2 Aircraft familiarization and introduction to Normal Procedures.	x	
3	3.1.3	FFS #1 Normal Procedures, All phases of Normal Flight and Maneuvers.		x
4	3.1.4	FFS #2 Non-normal Maneuvers, Low visibility, Raw Data ILS/ 3D and Go-Around.		x
5	3.1.5	FFS #3 Non-normal Maneuvers, Non-precision approach and Crosswind technique.		x
6	3.1.6	APT #3 Introduction to Non-normal Emergency procedures.	x	
7	3.1.7	APT #4 Non-normal Emergency procedures, Eng-fail handling, and Evacuation.	x	
8	3.1.8	FFS #4 Non-normal training including OEI. Airsystems, Emergency Descent. Progress check		x
9	3.1.9	FFS #5 Engine-out procedure and OEI handling including Go-Around.		x
10	3.1.10	FFS #6 Winter operations. Electrical failure, Flaps, Stabilizer and Flight control issues. Progress Check.		x
11	3.1.11	FFS #7 Landing Gear, Hydraulic failure, Windshear and Pilot Incapacitation.		x
12	3.1.12	FFS #8 LOFT with failure inflight, Maneuvers and OEI handling. Final Check.		x

#### CCQ A320/340

1	3.1.14	FFS CCQ 1, A320/340 Aircraft familiarization and introduction to Normal Procedures		x
2	3.1.15	FFS CCQ 2, A320/340 Approaches with different malfunctions including flt ctrl law, hydraulic system, RA failure		x
3	3.1.16	FFS CCQ 3, A320/340 Approaches and maneuvers with different malfunctions including engine failure and dual engine failure on same wing. Emergency descend and complex failures		x

CCQ A330/340

1	3.1.18	FFS CCQ 1, A330/340 Approaches and maneuvers with different malfunctions including engine failure and dual engine failure on same wing. Emergency descend and complex failures		x
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3.3 COURSE STRUCTURE: PHASE OF TRAINING

The flight training is divided into 2 stages of training.

- Normal Procedures
- Non-Normal Procedures

The first stage (Normal Procedures) contains normal procedures, supplementary procedures, maneuvers and other procedures related to normal flight. This stage will give the student the basic knowledge of how to fly the A340 in normal operations. The first sessions will be conducted in APT and then onto FFS. After FFS #3, the student will return back to the APT where stage 2 starts. Non-Normal Procedures, which covers emergency procedures and non-normal checklist and procedures. There are 2 APT sessions covering the intro of non-normal stage, following by 5 FFS sessions.

The first stage, Normal Procedures consists of 2 APT sessions (8 hours) and 3 FFS sessions (12 hours), a total of 20 hours training, excluding briefings. The second stage, Non-Normal Procedures consists of 2 APT sessions (8 hours) and 5 FFS sessions (20 hours), a total of 28 hours of training, excluding briefings.

Each session serves as a minor progress check and must be passed within the Stoflight training limitations and lesson objectives. The last session (FFS #8) is an “academy-check” and must be passed and signed off before the student can be released for skill test.

3.4 COURSE STRUCTURE: INTEGRATION OF SYLLABI

The theoretical knowledge training is mandatory before performing any flight training sessions; this ensures proficiency in aircraft systems, limitations, performance and mass & balance, which is required to understand the aircraft and it’s procedures.

The first 2 APT sessions are mandatory before any FFS training.

3.5 STUDENT PROGRESS

One of the primary goals of Stoflight training policy is to quickly identify deviation in student progress for early corrective purposes. This can be achieved due to a training philosophy which allows maximum 1 item below standard and/or 5 items marked as hold item per session, before additional training is required. Every student must pass each training session (max 1 item below standard and/or 5 items marked as hold item, is allowed) before continuing to the next training session (e.g., if the student receives 1 below standard, 2 hold items, the student may continue to the next session however these items must still be completed prior to the skill test.

There are 2 progress checks located at FFS #4 and FFS #8, for the CCQ FFS 3 is the progress check. The criteria for these checks can be found at TM A340 1.9.4, Progress check.

The final session (FFS #8) is considered the final “progress check” (also known as an academy-check) to ensure that student is proficient and ready for a skill test.

### 3.6 INSTRUCTIONAL METHODS

APT sessions will be used together with an instructor. This will allow the students to exercise multi-crew operations including checklist training and procedural flows.

The FFS sessions will be trained in a full flight simulator with a TRI or SFI. For ZFTT a TRI is required.

It is important that during any flight training session, a thorough briefing, pre- and post- is conducted (also referred to as briefing and de-briefing). The briefing is usually performed at the simulator training center’s allocated briefing rooms which are equipped with a whiteboard and a computer to easily demonstrate necessary items.

The pre-briefing always starts with the previous lesson (if any), to discuss possible questions from previous lesson before continuing to the planned lesson. The briefing then continues to the overview of the planned lesson, where the instructor describes the session to be trained and possible maneuvers and specific training items in detail. The instructor should always engage the students to create an interactive session, where the student will be given room to ask questions and engage in discussions regarding the training session and other related issues. It is important that the instructor ensures that the students understand the planned lesson ahead. This gives the student a clear idea of what shall be expected during the training, which is good for mental preparation.

The post-briefing should always start with giving the students a chance to reflect and discuss their perspective of the training session. The instructor shall then debrief the session given, in a chronological order from start of the session to finish. The students shall always be given the opportunity to freely ask questions and interact in the debriefing. When the debriefing of the given session is completed, the instructor shall prepare the student by a short briefing of the upcoming training session with possible study and training tips.

Stoflight will throughout the type rating course, exercise and teach CRM and airmanship values.

### 3.7 PROGRESS CHECK

All progress tests and checks must be documented in the student training record sheet. Once the instructor has signed off a training session, this means that the student has passed that specific session.

## 4. THEORETICAL KNOWLEDGE INSTRUCTION

### 4.1 STRUCTURE OF THE THEORETICAL KNOWLEDGE COURSE TYPE RATING

During the theoretical course, normally the student will mainly use CBT/WBT combined with theoretical classroom instruction. The overall theoretical training will take 12 days of which a minimum of 5 is under classroom instruction. The theoretical course may also 'be taught as "classroom-study"-only, see table below. This theory course covers A340 series.

The theoretical course consists of 2 stages:

- Aircraft Systems
- Flight Performance & Planning

Aircraft systems cover the required system knowledge of the A340 according to the aircraft manufacturer's Flight Crew Operating Manual (FCOM vol. 2). This section is divided into 15 system chapters + 4 review sessions. After completion of this stage, a theoretical examination will be given with 100 questions.

Flight Performance & Planning will teach the student the required knowledge in order to perform necessary planning and calculations during real-life operations.

Note: The marked column shows which topics are possible via CBT/WBT or classroom instructional method. (E.g., Flight Controls may be taught through CBT/WBT or classroom study).

#### 4.1.2 SCHEDULE TYPE RATING

The theory training comprises a total of 76 hours including theoretical tests. This is distributed through approximately 50/50 self-study (CBT) and classroom teaching. The training is estimated to cover approximately 12 days.

### 4.2 LESSON PLANS TYPE RATING

#### 4.2.1 TYPE RATING

TOPIC	TIME	ACC. TIME	CBT	CR
A340 Introduction & Safety Introduction Course - Safety Introduction Course - A340 Training Introduction - Airbus Manuals - CBT Study Technique	02:00	02:00		x
Aircraft General - Overview and Dimensions - Instrument Panels - Lightning - Doors and Windows - Oxygen Systems - Water and Lavatory - Emergency Equipment - Limitations	01:30	03:30	x	

- Flight Deck				
Electrical - System Overview - Controls and Indicators - AC System - DC System - Standby System	02:00	05:30	x	
Fire Protection - Fire and Overheat Overview - Controls and Indicators - Engine Fire Protection - APU Fire Protection - Wheel Well Fire Protection - Cargo Compartment Fire Protection - Lavatory Fire Protection - Fire System Testing	01:30	07:00	x	
Hydraulics - System Overview - Controls and Indicators - G and Y Systems - Standby System - Power Transfer Unit	02:00	09:00	x	
Fuel - System Overview - Controls and Indicators - Fuel Pumps - Fuel System Servicing	01:00	10:00	x	
Flight Controls - System Overview - Controls and Indicators - Roll Control - Pitch Control - Mach Trim System - Speed Trim System - Yaw Control - Spoilers & Speedbrakes - Flaps and Slats	03:00	13:00	x	
Review 1 - Aircraft General - Electrical - Fire Protection - Hydraulics - Fuel - Flight Controls	04:00	17:00		x

<p>Landing Gear</p> <ul style="list-style-type: none"> <li>- System Overview</li> <li>- Controls and Indicators</li> <li>- Air/Ground Sensing</li> <li>- Nose Wheel Steering</li> <li>- Brake System</li> </ul>	01:30	18:30	x	
<p>Engines</p> <ul style="list-style-type: none"> <li>- System overview</li> <li>- Controls and indicators</li> <li>- Engine Start</li> <li>- Thrust Reversers</li> <li>- Electronic Engine Control</li> </ul>	02:00	20:30	x	
<p>APU</p> <ul style="list-style-type: none"> <li>- System Overview</li> <li>- Controls and Indicators</li> <li>- Limitations</li> <li>- APU Start &amp; Shutdown</li> <li>- Electronic Control Unit</li> <li>- Fuel Control Unit</li> </ul>	01:00	21:30	x	
<p>Autoflight</p> <ul style="list-style-type: none"> <li>- System Overview</li> <li>- Controls and Indicators</li> <li>- Autoflight Director System</li> <li>- AFDS Annunciations</li> <li>- Autothrottle System</li> <li>- Altitude Alerting System</li> <li>- Automatic Flight Operations</li> <li>- AFS Operation in Windshear</li> <li>- Command Speed Limiting and Reversion Modes</li> </ul>	02:30	24:00	x	
<p>Flight Management System</p> <ul style="list-style-type: none"> <li>- System Overview</li> <li>- Controls and indicators</li> <li>- GPS</li> <li>- Inertial System</li> <li>- Radio Navigation System</li> <li>- Transponder &amp; Weather radar</li> <li>- Flight Management Computer</li> <li>- Control Display Unit</li> <li>- Navigation System</li> <li>- Managed Mode/ Selected Mode</li> <li>- Data Entry</li> <li>- Preflight</li> <li>- Takeoff and Climb</li> <li>- Cruise</li> <li>- Descent and Approach</li> <li>- FMC</li> <li>- Alternate Navigation System</li> <li>- Flight Management Nav Messages</li> </ul>	04:00	28:00	x	

<p>Flight Instruments</p> <ul style="list-style-type: none"> <li>- System Overview</li> <li>- Display Selection &amp; Control</li> <li>- Standby Flight Instruments</li> <li>- Clocks</li> <li>- Air Data System</li> <li>- Air Data Inertial Reference System</li> <li>- Aircraft Condition Monitoring System</li> <li>- Electronic Flight Instrument System</li> <li>- Primary Flight Displays</li> <li>- Navigation Displays</li> <li>- Electronic Attitude Director Indicator</li> <li>- Electronic Horizontal Situation Indicator</li> </ul>	02:30	30:30	x	
<p>EIS/ECAM</p> <ul style="list-style-type: none"> <li>-ECAM Handling</li> <li>-Correct application of procedures</li> <li>-Application of Correct checklist with conclusion</li> <li>-Use of ECAM for decision making</li> <li>-EIS Correct use of EFIS and interpretation</li> <li>-Alternate mode use of switching the instruments and trouble shooting</li> <li>- Interpretation of lights and conditions</li> <li>-Use of switching panels</li> </ul>	6:00	36:30	x	
<p>Review 2</p> <ul style="list-style-type: none"> <li>- Landing Gear</li> <li>- Engines</li> <li>- APU</li> <li>- Autoflight</li> <li>- Flight Management System</li> <li>- Flight Instruments</li> </ul>	04:00	40:30		x
<p>Air Systems</p> <ul style="list-style-type: none"> <li>- System Overview</li> <li>- Controls and Indicators</li> <li>- Bleed Air System</li> <li>- Duct Pressure and Overheat</li> <li>- Wing-Body Overheat</li> <li>- Air Conditioning Pack</li> <li>- Zone Temperature Control</li> <li>- Air Conditioning Distribution</li> <li>- Pressurization</li> </ul>	03:00	43:30	x	
<p>Anti-Ice, Rain</p> <ul style="list-style-type: none"> <li>- System Overview</li> <li>- Controls and Indicators</li> <li>- Flight Deck Window Heat</li> <li>- Windshield Wipers</li> <li>- Probe and Sensor Heat</li> <li>- Wing Anti-Ice System</li> </ul>	01:00	44:30	x	

<p>Warning Systems</p> <ul style="list-style-type: none"> <li>- System Overview</li> <li>- Controls and Indicators</li> <li>- Master Caution &amp; Annunciator lights</li> <li>- Cabin Altitude / Configuration warnings</li> <li>- PSEU</li> <li>- Mach/Airspeed Warnings</li> <li>- Stall Warning</li> <li>- Altitude Alerting System</li> <li>- Ground Proximity Alerts</li> <li>- EGPWS</li> <li>- Windshear Alerts</li> <li>- TCAS</li> <li>- Tail Skid</li> <li>- Other Alerts</li> </ul>	02:00	46:30	x	
<p>Communications</p> <ul style="list-style-type: none"> <li>- System Overview</li> <li>- Audio Control Panels</li> <li>- Radio Turning Panels</li> <li>- Cockpit Voice Recorder System</li> <li>- Interphone and PA System</li> <li>- Call System</li> </ul>	01:00	47:30	x	
<p>UPRT</p> <ul style="list-style-type: none"> <li>- Overview</li> <li>- Core competencies &amp; TEM</li> <li>- Environmental factors</li> <li>- Pilot perception and aircraft systems in UPRT</li> <li>- Angle of attack, G-load effect on stall speed</li> <li>- Pilot resilience</li> <li>- UPRT; recognition and recovery</li> </ul>	04:00	51:30	x	
<p>Review 3</p> <ul style="list-style-type: none"> <li>- Air Systems</li> <li>- Warning Systems</li> <li>- Communications</li> <li>- Others as necessary</li> </ul>	04:00	55:30		x
<p>Review 4</p> <ul style="list-style-type: none"> <li>- Review as necessary</li> <li>- EXAM</li> </ul>	07:00	62:30		x
<p>Flight Performance</p> <ul style="list-style-type: none"> <li>- Overview</li> <li>- Takeoff</li> <li>- Enroute All Eng</li> <li>- Enroute Eng Inop</li> <li>- Landing</li> <li>- Speeds</li> <li>- Airport Analysis Chart</li> </ul>	10:00	72:30		x

- A340 Limitations - Text per FCOM				
Flight Planning  - Flight Planning - Fuel Policy and Monitoring - Aircraft & Passenger Weight and Balance - Loadsheet -EXAM	03:30	76:00		x

### CCQ A330 – A340

TOPIC	TIME	ACC. TIME	CBT	CR
A340 Introduction & Safety Introduction Course  - Safety Introduction Course - A340 Training Introduction - Airbus Manuals - CBT Study Technique	2:00	2:00		X
CBT  -Aircraft general -Electric -Flight control -Fuel -Hydraulic -Landing gear -Pneumatic -Power plant	3:00	5:00	X	
-EXAM	3:00	8:00		X
-Debriefing	1:00	9:00		X

### 4.2.3 CCQ A320 – A340

TOPIC	TIME	ACC. TIME	CBT	CR
A340 Introduction & Safety Introduction Course  - Safety Introduction Course - A340 Training Introduction - Airbus Manuals - CBT Study Technique	2:00	2:00		X
CBT  -Introduction -Aircraft general -Air conditioning / pneumatic -Communication	3:00	5:00	X	



-Electric -Flight Controls				
CBT  -Ice & rain protection -Landing gear -Fuel -Auto Flight -Fire protection -Hydraulic -Ind / Record EIS -Lights	3:00	8:00	X	
CBT  -Fuel -APU -Doors -Navigation -Cabin -Power plant	3:00	11:00	X	
FMGS	2:00	13:00	X	
CBT  -Performance -Derated -Cabin trainer -Walk around video	2:00	15:00	X	
EXAM	3:00	19:00		X
Debriefing	1:00	20:00		X

### 4.2.4 CCQ A330 – A340

TOPIC	TIME	ACC. TIME	CBT	CR
A340 Introduction & Safety Introduction Course  - Safety Introduction Course - A340 Training Introduction - Airbus Manuals - CBT Study Technique	1:00	1:00		X
CBT  -Introduction -Aircraft general -Air conditioning / pneumatic	1:00	2:00	X	

-Communication -Electric -Flight Controls				
CBT  -Ice & rain protection -Landing gear -Fuel -Auto Flight -Fire protection -Hydraulic -Ind / Record EIS -Lights	1:00	3:00	X	
CBT  -Fuel -APU -Doors -Navigation -Cabin -Power plant	1:00	4:00	X	
FMGS	1:00	5:00	X	
CBT  -Performance -Derated -Cabin trainer -Walk around video	2:00	7:00	X	
EXAM	2:00	9:00		X
Debriefing	1:00	10:00		X

### 4.3 TEACHING MATERIALS

The follow course literature will be used:

- Airbus 340 Flight Crew Operating Manual Part 1 (FCOM 1)
- Airbus 340 Flight Crew Operating Manual Part 2 (FCOM 2)
- Airbus 340 Flight Crew Training Manual (FCTM)
- Airbus 340 Quick Reference Handbook (QRH)
- Operational Suitability Data – Flight Crew, OSD-FC
- CPaT A340 CBT/WBT

The following training aids will be used:

- Airbus A340 APT
- APT Device

- Electronic FMS Trainer
- Whiteboard
- Projector
- Airplane model
- Other teaching materials as necessary

Stoflight shall prior to any course start ensure that the related teaching materials are relevant, if any updates have occurred that has a large impact on the procedures at hand, Stoflight shall then update the related teaching materials. This is the responsibility of the HT.

#### 4.4 STUDENT PROGRESS

During WBT or CBT, the student will automatically be given a progress test after completion of each chapter. During stage 1, there will be 3 classroom review sessions with an instructor. During these reviews, the instructor shall assess the student's progress to ensure normal progress which reflects an average of 75% correct general competence of the theoretical subjects. There is 1 additional review session (Review 4), which is self-study for the student. Should the instructor assess that the student is below the "normal progress" (this can be tested by giving the students questions/written progress test, if necessary), he or she shall follow the identification of unsatisfactory progress procedure (TM 1.10.4).

#### 4.5 PROGRESS TESTING AND EXAM

There is a written final exam for each stage.  
The first exam covers aircraft systems and consists of 100 questions, 3 hours time limit and a 75% required pass mark. The second exam covers Flight Performance & Planning which consists of 20 questions, 2 hours time limit and a 75% required pass mark.

Should a student fail the above-mentioned exams, he or she can re-take the test. However, the instructor in consultant with CFI(MP) may decide additional training prior to re-taking the test, as well as the waiting period between the test and re-taking the test.

#### 4.7 REVIEW PROCEDURE

To ensure sufficient training standard, Stoflight has additional to the CBT or WBT training, added 3 classroom review sessions with a theoretical knowledge instructor. These sessions will review the topics performed and topics ahead, the purpose of these sessions are to assist the student in the self-study process, which can be difficult sometimes. Should the student for any reason not meet the standard criteria of Stoflight, the instructor will follow Stoflight procedure on the matter, see TM A340 1.9.3.

## Appendix 1

### TASE –Training Areas of Special Emphasis applicable to all Airbus Fly by Wire aircraft.

All the following characteristics of the Airbus Fly-By-Wire family must be emphasized during A340 training and are common to all the Airbus Fly-By-Wire family aircraft: A320, A330, A340 family.

- **Fly-By-Wire:** the following must be included in both initial and recurrent training: Knowledge of flight characteristics and the degree of flight envelope protection provided by the various flight control laws for pitch, roll and yaw control. Procedural and handling consequences following multiple failures that result in alternate or direct law, both at low and high altitude. Knowledge of the use of side stick controller with a special emphasis on the relationship between the two controllers and the transfer/takeover of control.
- **Use of Flight Management System** Knowledge of the various modes of automation. Knowledge and skills related to MFD / FCU use. Recognition of mode awareness and transition modes through the FMA. CRM issue linked to automation (task sharing and crosschecks).
- **Use of ECAM.** Knowledge of appropriate use of ECAM in conjunction with system failures. Crew discipline for ECAM actions: respect of the depicted procedure, crosscheck of irreversible actions, aircraft status analysis.
- **Autothrust system.** Knowledge of the thrust control system in conjunction with the “non-moving throttles”. Recognition of all messages associated to Autothrust failure, engagement, and disconnection.
- **Specific TASE applicable for the A340**  
Emphasize the knowledge of the use of sidestick controller to perform the correct rotation technique.
  - How to initiate the rotation.
  - How to achieve and maintain the rotation rate.
  - How to achieve pitch attitude after liftoff.