

# **CESSNA 206**

## *Training Manual*

*By*

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## Introduction

This training manual provides technical and operational descriptions of the Cessna 206 aircraft model range.

Information is provided in the introduction on the model C205 and C207, for background information on the model development.

The technical and operational information contained within the book is provided for the Cessna 206 series only.

The information is intended as an instructional aid to assist with conversion and or ab-initio training in conjunction with an approved training organisation and use of the manufacturer's operating handbook. The text is arranged according to the progression typically followed during training to allow easier use by students and assimilation with training programmes. This layout differs from the Pilot's Operating Handbook, which is laid out for easy operational use.

This material does not supersede, nor is it meant to substitute any of the manufacturer's operation manuals. The material presented has been prepared from the basic design data obtained in the Pilot's Operating Handbook, engineering manuals and from operational experience.



*Illustration 1a C206 Utility (Cargo) Version*

## History

The Cessna aircraft company has a long and rich history. Founder Clyde Cessna built his first aeroplane in 1911, and taught himself to fly it! He went on to build a number of innovative aeroplanes, including several race and award winning designs.

In 1934, Clyde's nephew, Dwane Wallace, fresh out of college, took over as head of the company. During the depression years Dwane acted as everything from floor sweeper to CEO, even personally flying company planes in air races (several of which he won!). Under Wallace's leadership, the Cessna Aircraft Company eventually became the most successful general aviation company of all time.

The Cessna 205, 206, and 207, known variously as the Super Skywagon, Super Skylane and Stationair, are a family of single engine, general aviation aircraft with fixed landing gear and may be used in commercial air service or for personal use. The family was originally developed from the popular retractable-gear Cessna 210.

The Cessna 206 family is best known for the powerful engine, rugged construction, large cabin and loading capacity. These features have made the aircraft popular 'bush planes' and for aerial work such as skydiving or photography, they can also be equipped with amphibious floats and skis. The combined total number of Cessna 205, 206 and 207 produced so far is over 8500.

## Cessna 205

In its initial form the 205 (originally 210-5) was essentially a fixed undercarriage derivative of the 210 Centurion. Although designated as a 1963 model the 205 was introduced to the Cessna lineup late in 1962, followed by the C205A in 1964.

The C205 is powered by the same 260hp IO-470 engine as the 210B and featured an additional small cargo door on the left side of the fuselage.

The 205 retained the early 210's engine cowling bulge, originally where the 210 stowed its nose wheel on retraction (the space where the nose wheel would have retracted was used for radio equipment in the 205). This distinctive cowling was made more streamlined on the later Cessna 206. There were only 577 Cessna 205's produced, before being replaced by the popular Cessna 206.



## Cessna 206

The six-seat Cessna 206 was introduced as a 1964 model and was built until 1986, when Cessna halted production of its single-engine product. It was then re-introduced in 1998 and remains in production at the time of publication. The total number of Cessna 206's produced is now over 6500.

Unlike the C210, from which it is based, the C206 has had relatively few changes over the years. The main changes include the engine (1964 and 1998), electrical system (1965 and 1973) and maximum weight (1967).

## Cessna U206

The original 1964 model was the U206, powered by a 285hp Continental IO-520-A. The "U" designation indicated "utility" and this model was equipped with a pilot side door and two opposing rear doors, permitting more convenient access to the back two rows of seats, and permitting easy loading of over-sized cargo.

The TU206 offered a turbocharged version of the U206, powered by the Continental TSIO-520-C engine producing 285hp. In 1967 the turbo TU206 was powered by a TSIO-520-F providing 300hp. The additional 15hp was available at a higher rpm, but was limited to 5 minutes for takeoff and produced a significant noise penalty.

From 1964 to 1969 the U206 was known as the "Super Skywagon". From 1970 it was named the "Stationair", a contraction of "Station Wagon of the Air", which is a good description of the aircraft's intended role.

In 1977 the U206 had its engine upgraded to a Continental IO-520-F of 300 hp (continuous rating, obtained at a more reasonable rpm speed than the previous IO-520-F) and the TU206 engine was changed to the TSIO-520-M producing 310hp.

Production of all versions of the U206 was halted in 1986 when Cessna stopped manufacturing all piston engine aircraft. A total of 5208 U206's had been produced.

## Cessna P206

1965 saw the P206 added to the line. In this case the "P" stood for "people", as the P206 had passenger doors on both sides, similar to the Cessna 210 from which it originated.

The P206 was produced from 1965 to 1970 and was powered by a Continental IO-520-A of 285hp. There was a turbocharged model designated TP206 which was powered by a Continental TSIO-520-A also of 285hp.

647 P206's were produced under the name "Super Skylane" which incorrectly made it sound like a version of the Cessna 182.

## **Cessna 206H**

After a production break of twelve years, Cessna started manufacturing a new version of the 206 in 1998, with the introduction of the 206H. The "H" model is generally similar to the previous U206 configuration, with a pilot entry door and double rear doors for access to the middle and back seats. The C206H is marketed under the name "Stationair", and Cessna aptly portrays it as the "Sport Utility Vehicle of the air".

The 206H is powered by a Lycoming IO-540-AC1A powerplant producing 300hp. The turbocharged T206H is powered by a Lycoming TSIO-540-AJ1A engine of 310hp.

Both the 206H and the T206H remain in production in 2008. By the end of 2004 Cessna had produced 221 206H's and 505 T206H's, for a total production of 726 "H" models.

## **Cessna 207**

The Model 207 was a seven and later eight seat development of the 206, achieved by stretching the design further to allow space for more seats. The nose section was extended 18" by adding a constant-section nose baggage compartment between the passenger compartment and the engine firewall; the aft section was extended by 44" by inserting a constant-area section in the fuselage area just aft of the aft wing attach point. Thus the propeller's ground clearance was unaffected by the change (the nose wheel had moved forward the same distance as the propeller), but the tail moved aft relative to the main wheel position, which made landing (without striking the tail skid on the runway) a greater challenge. The move gave that aircraft a larger turning radius, since the distance between main wheels and nose wheel increased by 18 inches but the nose wheel's maximum allowed deflection was not increased.

The 207 was introduced as a 1969 model featuring a Continental IO-520-F engine of 300hp. A turbocharged version was equipped with a TSIO-520-G of the same output.

At the beginning of production the model was called a Cessna 207 "Skywagon", but in 1977 the name was changed to "Stationair 7". 1977 also saw a change in engine on the turbocharged version to a Continental TSIO-520-M producing 310hp – the same engine used in the TU206 of the same vintage.

The 207 added a seat in 1980 and was then known as the "Stationair 8". Production of the 207 was completed in 1984, just two years before U206 production halted. A total of 788 Cessna 207's were manufactured.

The Cessna Model 207 has been popular with air taxi companies, particularly on short runs where its full seating capacity could be used. Very few of these aircraft have seen private use.

## Models Differences Table

A brief outline of the models by year with major changes is outlined in the table below.

During practical training, reference should be made to the flight manual of the aeroplane you will be flying to ensure that the limitations applicable for that aeroplane are adhered to. Likewise when flying different models it should always be remembered that MAUW, flap limitations, engine limitations and speeds may vary between models and with modifications. Before flying different models, particularly if maximum performance is required, the POH of the aircraft you are flying should be reviewed to verify differences.

<b>TYPE</b>	<b>NAME</b>	<b>YEAR</b>	<b>MODEL</b>	<b>MAJOR DIFFERENCES</b>
C205		1963	205 0001-0480	3300lbs maximum takeoff weight,
C205A		1964	205 0481-0577	IO470 engine; essentially a C210B with fixed gear and electric flap
C206	Super Skywagon	1964	206 0001-0275	Engine changed to IO520
U206	Super Skywagon (Utility Cargo Door)	1965	206 0276-0437	First cargo door version, 14V Alternator replaces Generator
P206	Super Skywagon (Passenger Door)	1965	P206 0001-0160	First C206 to come out with 6 seats as a standard (not optional) fitting
P206	Super Skylane	1965		

<b>TYPE</b>	<b>NAME</b>	<b>YEAR</b>	<b>MODEL</b>	<b>MAJOR DIFFERENCES</b>
U206A	Super Skywagon (Utility Cargo Door)	1966	U206 0438-0656	Maximum takeoff weight increased to 3600lbs
U206B		1967	U206 0657-0914	
U206C		1968	U206 0915	
TU206A	Turbo-System Super Skywagon (Utility Cargo Door)	1966	U206 0438-0656	
TU206B		1967	U206 0657-0914	
TU206		1968	U206 0915	
P206A	Super Skylane	1966	P206 0161-0306	
TP206A	Turbo-System Super Skylane	1966	P206 0161-0306	
P206A	Super Skylane	1966	P206 0161-0306	
P206B		1967	P206 0307-0419	
P206C		1968	P206-0420	
TP206A	Turbo-System Super Skylane	1966	P206 0161-0306	
TP206B		1967	P206 0307-0419	
TP206C		1968	P206-0420	
TU206D U206D	Super Skywagon Turbo-System Super Skywagon	1969	U206-1235 U206-1444	
P206D TP206D	Super Skylane Turbo-System Super Skylane	1969	P206-0520 P206-0603	
U206E	Super Skywagon	1970	U20601445- U20601587	
TU206E	Turbo-System Super Skywagon	1970		
P206E	Super Skylane	1970	P20600604-647	
TP206E	Turbo-System Super Skylane	1970	P20600604-647	
U206E	Stationair Turbo Stationair	1971	U20601588-1700	
U206F	Stationair Turbo Stationair	1972	U20601701-1874	Flap toggle switch changed to pre-select lever
		1973	U20601875-2199	12V battery changed to 24V