CATERPILLAR®

SENR8305-00

Disassembly and Assembly

CHALLENGER 35, 45, AND 55 AGRICULTURAL TRACTORS TRANSMISSION

S/N 7DM00001-UP

CATERPILLAR®

Specifications
3114, 3116 and 3126 Engines for Caterpillar Built Machines
Media Number -SENR3582-16 **Publication Date -01/02/2007** **Date Updated -20/02/2007**

i01582109

Engine Design

SMCS - 1201

3114 Engine

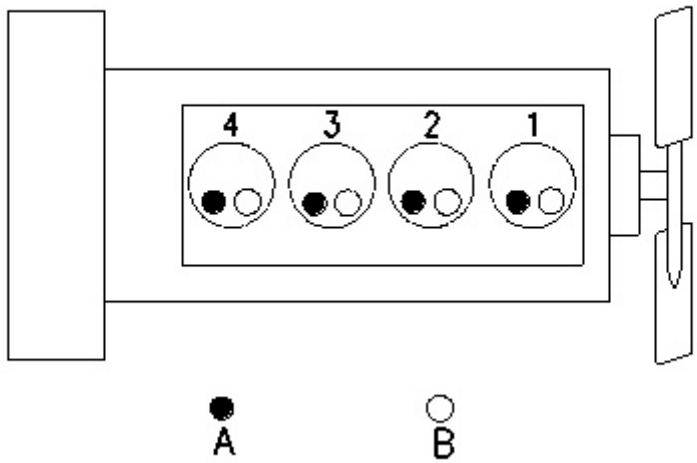

Illustration 1 g00296424
Cylinder and valve location

(A) Exhaust valves

(B) Inlet valves

Bore ... 105.0 mm (4.13 inch)

Stroke ... 127.0 mm (5.00 inch)

Displacement ... 4.4 L (268 in^3)

Number of cylinders ... 4

Cylinder arrangement ... In-line

Valves per cylinder ... 2

In order to check the engine valve lash setting, the engine must be cold and the engine must be stopped.
Engine valve lash settings

Inlet ... 0.38 mm (0.015 inch)
Exhaust ... 0.64 mm (0.025 inch)

Type of combustion ... Direct Injection

Firing Order ... 1-3-4-2

The crankshaft rotation is viewed from the flywheel end of the engine. Crankshaft rotation ... counterclockwise

Note: The front end of the engine is opposite of the flywheel end of the engine. The left side of the engine and the right side of the engine are viewed from the flywheel end of the engine. The number one cylinder is the front cylinder.

3116 Engine

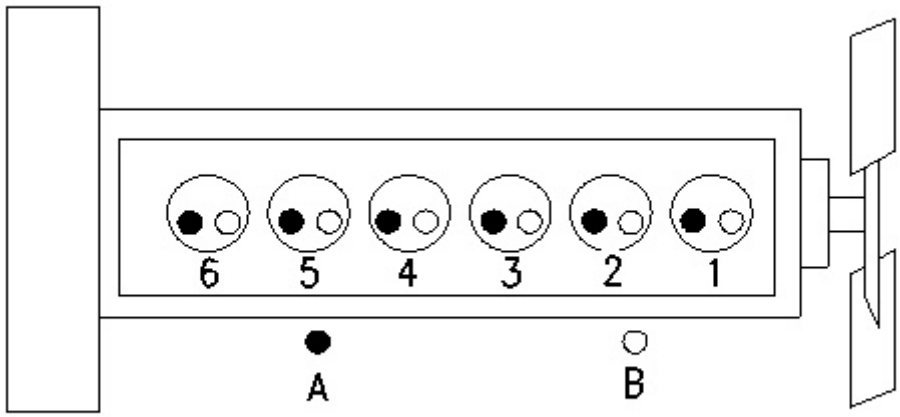

Illustration 2 g00821000
Cylinder and valve location

(A) Exhaust valves

(B) Inlet valves

Bore ... 105.0 mm (4.13 inch)

Stroke ... 127.0 mm (5.00 inch)

Displacement ... 6.6 L (403 in^3)

Number of cylinders ... 6

Cylinder arrangement ... In-line

Valves per cylinder ... 2

In order to check the engine valve lash setting, the engine must be cold and the engine must be stopped.
Engine valve lash settings

Inlet ... 0.38 mm (0.015 inch)
Exhaust ... 0.64 mm (0.025 inch)

Type of combustion ... Direct Injection

Firing Order ... 1-5-3-6-2-4

The crankshaft rotation is viewed from the flywheel end of the engine. Crankshaft rotation ... counterclockwise

Note: The front end of the engine is opposite of the flywheel end of the engine. The left side of the engine and the right side of the engine are viewed from the flywheel end of the engine. The number one cylinder is the front cylinder.

3126 Engine

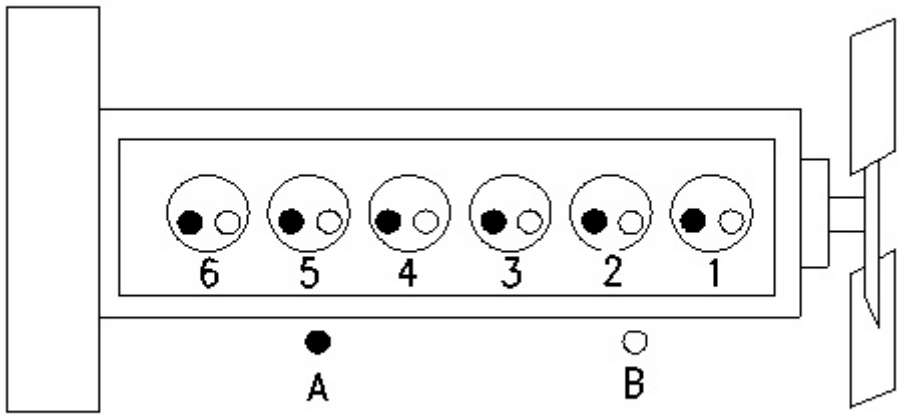

Illustration 3 g00821000
Cylinder and valve location

(A) Exhaust valves

(B) Inlet valves

Bore ... 110.0 mm (4.33 inch)

Stroke ... 127.0 mm (5.00 inch)

Displacement ... 7.2 L (442 in^3)

Number of cylinders ... 6

Cylinder arrangement ... In-line

Valves per cylinder ... 2

In order to check the engine valve lash setting, the engine must be cold and the engine must be stopped.
Engine valve lash settings

Inlet ... 0.38 mm (0.015 inch)
Exhaust ... 0.64 mm (0.025 inch)

Type of combustion ... Direct Injection

Firing Order ... 1-5-3-6-2-4

The crankshaft rotation is viewed from the flywheel end of the engine. Crankshaft rotation ... counterclockwise

Note: The front end of the engine is opposite of the flywheel end of the engine. The left side of the engine and the right side of the engine are viewed from the flywheel end of the engine. The number one cylinder is the front cylinder.

CATERPILLAR®

Specifications
3114, 3116 and 3126 Engines for Caterpillar Built Machines
Media Number -SENR3582-16 **Publication Date -01/02/2007** **Date Updated -20/02/2007**

i01132532

Belt Tensioner

SMCS - 1358

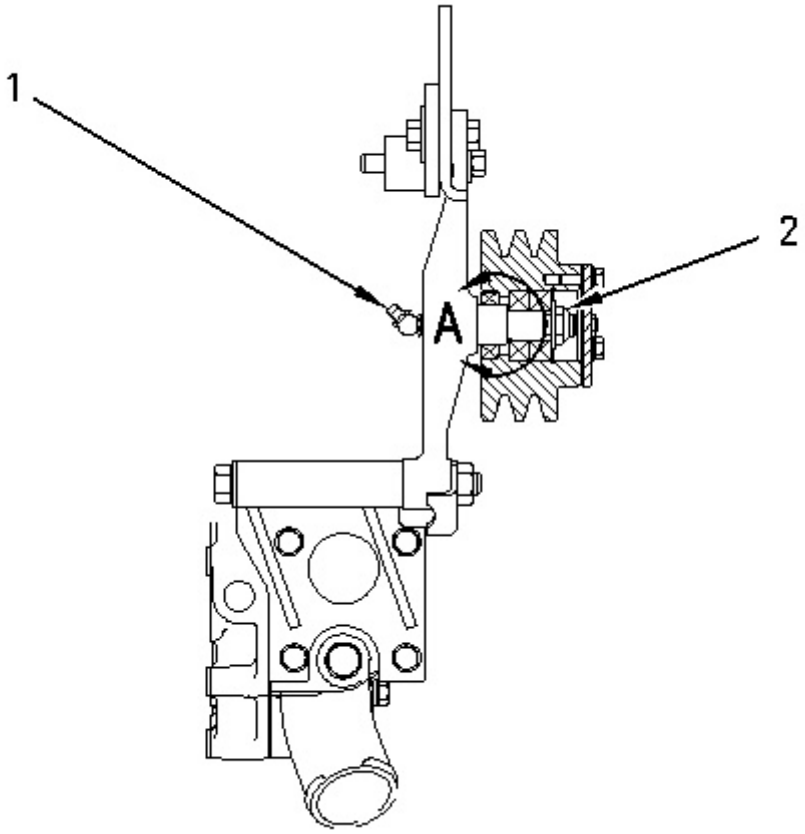

Illustration 1 g00599179

(1) Fill the bearing cavity with **1P-0808** Multipurpose Grease.

(2) Tighten the locknut to the following torque. ... 35 ± 7 N·m (26 ± 5 lb ft)

CATERPILLAR®

Specifications
3114, 3116 and 3126 Engines for Caterpillar Built Machines
Media Number -SENR3582-16 **Publication Date -01/02/2007** **Date Updated -20/02/2007**

i01582274

Magnetic Pickup

SMCS - 1905; 1907

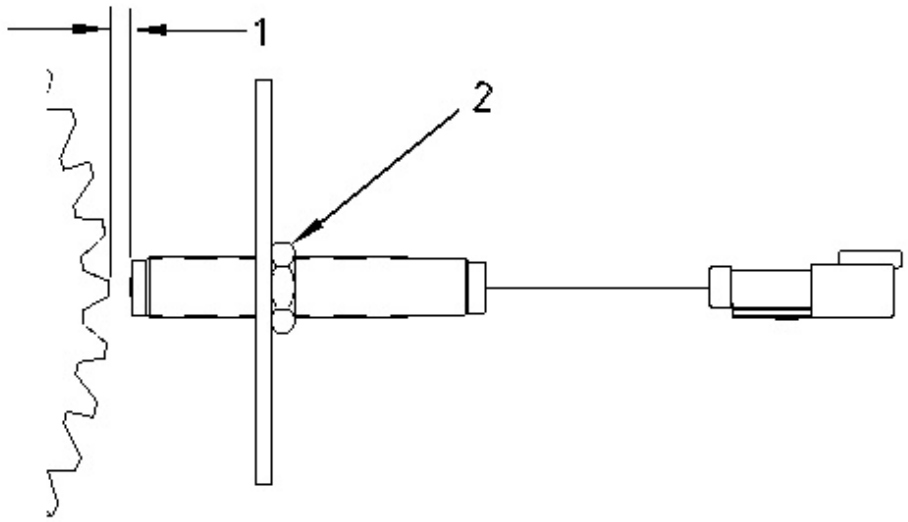

Illustration 1 g00345302
Typical example of magnetic pickup

While the engine is stopped, install the magnetic pickup. Once the magnetic pickup is in contact with the flywheel ring gear, turn the magnetic pickup counterclockwise to the following distance. ... 180 ± 36 degrees

(1) Air gap

Clearance between magnetic pickup and flywheel ring gear ... 0.70 ± 0.14 mm (0.028 ± 0.006 inch)

(2) Locknut

Install the locknut and tighten the locknut to the following torque. ... 45 ± 7 N·m (33 ± 5 lb ft)

Diesel Engines

ABS	Agco-Sisu
Akasaka	Baudouin
BMW	Bukh
Caterpillar	CHN 25/34
Cummins	Daihatsu
Detroit	Deutz
Doosan-Daewoo	Fiat
Ford	GE
Grenaa	Guascor
Hanshin	Hatz
Hino	Honda
Hyundai	Isotta
Isuzu	Iveco
John-Deere	Kelvin
Kioti	Komatsu
Kubota	Liebherr
Lister	Lombardini
MAK	MAN B&W
Mercedes	Mercruiser
Mirrlees BS	Mitsubishi
MTU	MWM
Niigata	Paxman
Perkins	Pielstick
Rolls / Bergen	Ruggerini
Ruston	Scania
Shibaura	Sisu-Valmet
SKL	Smit-Bolnes
Sole	Stork
VM-Motori	Volvo
Volvo Penta	Westerbeke
Wichmann	Yanmar

Machinery

ABG	Airman
Akerman	Ammann
Astra	Atlas Copco
Atlas Weyha.	Atlet
Bell	Bendi
Bigjoe	Bobcat
Bomag	BT
Carelift	Case
Caterpillar	Cesab
Challenger	Champion
Claas	Clark
Combilift	Crown
Daewoo-Doosan	Demag
Deutz-Fahr	Dressta

Machinery

Drott	Dynapack
Extec	Faun
Fendt	Fiat
Fiatallis	Flexicoil
Furukawa	Gehl
Genie	Grove-gmk
Halla	Hamm
Hangcha	Hanix
Hanomag	Hartl
Haulpack	Hiab
Hidromek	Hino truck
Hitachi	Hyster
Hyundai	IHI
Ingersoll-rand	JCB
JLG	John-Deere
Jungheinrich	Kalmar
Kato	Kioti
Kleeman	Kobelco
Komatsu	Kramer
Kubota	Lamborghini
Landini	Liebherr
Linde	Link-belt
Manitou	Massey-Ferg.
Mccormick	MDI-Yutani
Mitsubishi	Moxy
Mustang	Neusson
New-Holland	Nichiyu
Nissan	OK
OM-Pimespo	others-tech
Pel-Job	PH-mining
Poclain	Powerscreen
Same	Samsung
Sandvik	Scania
Schaefer	Schramm
Sennebogen	Shangli
Shibaura	Steiger
Steinbock	Steyr
Still	Sumitomo
Super-pac	Tadano
Takeuchi	TCM
Terex	Toyota
Valpadana	Venieri
Versatile	Vogele
Volvo	Weidemann
Wirtgen	Yale
YAM	Yanmar