

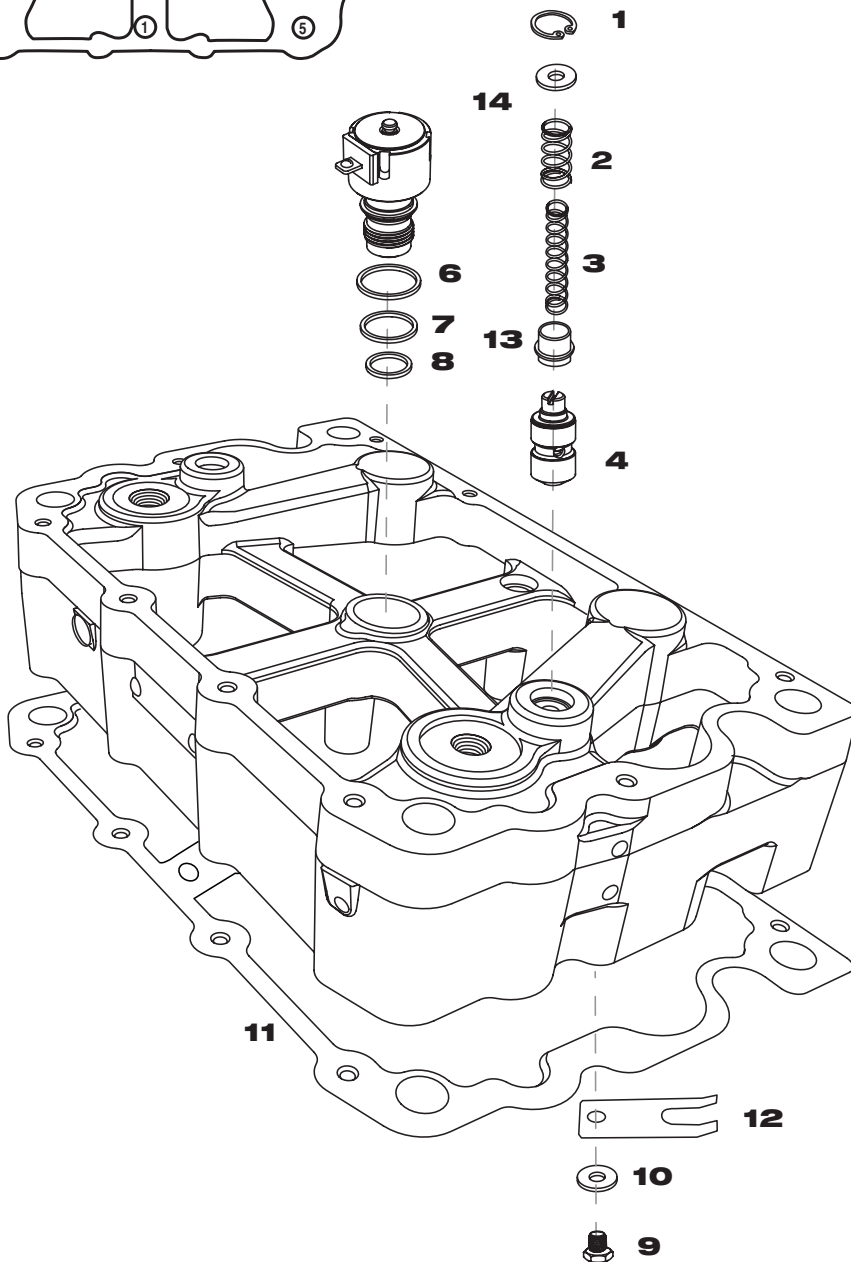
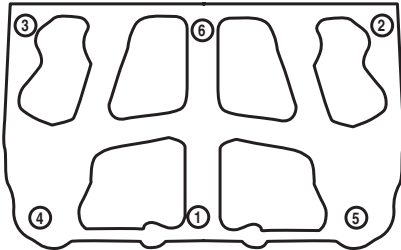
Part No. P14013

TUNE UP KIT

Engine Application:
Cummins
N-14/N-14 Plus

Fits Models:
Pacbrake P-14,
P-14A & P-14B

Torque sequence



ILLUS. No.	PART No.	DESCRIPTION	QTY.
1	P15561	Snap ring-control valve	6
2	P11436	Outer control valve spring	6
3	P11437	Inner control valve spring	6
4	P11930	Control valve	6
5	P34648	Solenoid wire	3
6	P01081	Upper solenoid seal	3
7	P01082	Center solenoid seal	3
8	P01083	Lower solenoid seal	3
9	P01492	Capscrew	6
10	P01030	Washer	6
11	P16846	Housing gasket	3
12	P18792	Spring-master piston	6
13	P14100	Spring collar-control valve	6
14	P38015	Retainer	6

NOTE: Valve cover gasket is not supplied

PACBRAKE[®]
 ENGINE & EXHAUST BRAKES

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Installation Instructions

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Removal Of The Housings From The Engine

- A) Clean the top of the engine around all three engine brake housings, and remove valve covers, saving gaskets for reuse.
- B) Mark the position of each housing on the engine, it is good practice to reinstall the housings in their original location.
- C) Loosen the slave piston adjusting screw lock-nuts.
- D) Remove the wiring connector to each of the three housings.
- E) Loosen and remove the mounting capscrews, then remove the housings and gaskets, discard gaskets.

Disassembly And Assembly Of The Brake Housings

- A) Place the housings (in order) on a clean work bench.
Note: When removing all parts keep them in order of their original location for assembly.
- B) Remove the wire connector at the solenoid and at the lead out terminals.
Remove the solenoid and discard the seals and harness.
- C) Remove the control valve snap rings and retainers and discard. Use caution as the retainer is under light spring pressure.
Remove the springs, collars and control valves and discard as new ones are supplied in these kits.
- D) Remove the slave piston adjusting screws and inspect the plungers, for spring pressure.
- E) Turn the housings over and remove the master piston flat springs and master pistons.
Discard flat springs, capscrews and washers.
CAUTION: EYE PROTECTION MUST BE WORN WHEN PERFORMING THIS STEP!
- F) During slave piston removal, use extreme caution as the slave piston retainers are under heavy spring pressure.
Use Cummins tool PN# 3871654 or a "C" clamp and a socket to compress the springs. Compress the retainer just enough to relieve the tension from the snap ring, then remove the snap ring and back off the clamp.
Remove the slave pistons and springs keeping them in relation to their original positions and check for signs of wear or foreign material. Do not discard any of these parts. Removal is for inspection and cleaning only. Inspect bores and pistons for damage. Pistons should slide out easily. Replace as necessary.
- G) Clean the housings and all saved parts in OSHA approved solvent and dry with compressed air again, keeping saved parts in relation to their original positions.
- H) Assemble all parts into the housing using clean engine oil in the reverse procedure.
- I) When installing the slave piston assemblies and snap rings, make sure the ring is seated in the groove.
- J) When installing the master piston assemblies, make sure the legs on the spring are centered on each side of the wear pad.
- K) When installing the control valve assemblies, the collar must be installed with the **long side up**.
- L) Prior to solenoid installation, install the lower seal in the bore and the center and upper on the solenoid and lubricate with clean engine oil. Carefully insert into the bore, being sure that the seals do not get cut or twisted when tightening.
Torque to 15 lbs. ft. (20 N•m)
- M) Install the slave piston adjusting screws loosely.
- N) Install the 3 gaskets supplied on the rocker box housings.
- O) Install on the engine as per manufacturers installation instructions, using the torque sequence on the reverse side.
- P) Torque housing in two steps; first to 35 lbs. ft., then to 70 lbs. ft.
- Q) Slave adjustment is .023". Torque lock nut to 25 lbs. ft. **DO NOT EXCEED!**

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