IHC DUAL CYLINDER DUO-SERVO AUTOMATIC ADJUSTER

International Harvester
1510 MHC (1972-74)

DESCRIPTION

Automatic adjuster brakes are two-cylinder, two-shoe, self-centering type which anchor either at toe or heel of shoe web, depending on direction of rotation during brake application. There is no provision for integral parking brake; unit is used with transmission mounted parking brake only. Units can be manually adjusted (for drum removal, for example) without disengaging automatic adjuster pawl. Units automatically adjust when vehicle is traveling in reverse and brakes are applied.

ADJUSTMENT & SERVICING

BRAKE SHOE ADJUSTMENT

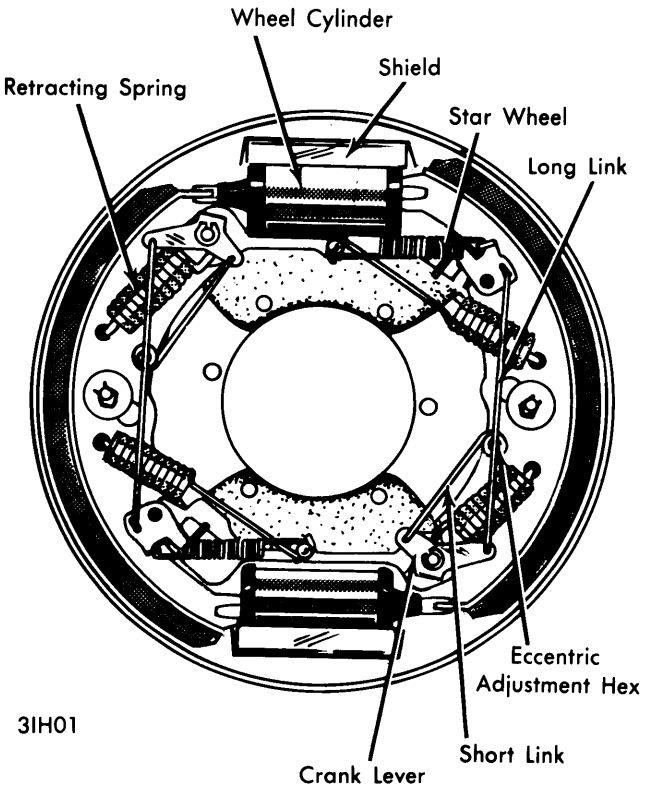
Brake shoes adjust when vehicle is traveling in reverse and brakes are applied. No other adjustment is necessary. During overhaul it is sometimes necessary to back off shoes to remove drums. This is done with two star wheels accessible through holes in backing plate.

PARKING BRAKE ADJUSTMENT

See Parking Brake Adjustment in IHC Cable Type Automatic Adjuster in this Section.

BLEEDING SYSTEM

See Hydraulic Brake Bleeding in this Section.



BRAKE ASSEMBLY

REMOVAL & INSTALLATION

BRAKE SHOES

Removal – 1) Unhook the two automatic adjuster springs. Remove each long adjuster link by pivoting back star wheel cranks until their slots align with link "U" hooks. Lift out links, then slide their "S" hooks from anchor pin cranks. Remove short links by rotating anchor cranks until "U" hooks clear eccentrics on shoe webs, then remove their smaller "U" hooks from cranks. Spread anchor crank "C" washers and lift off cranks.

2) To remove shoes, remove eccentric adjustment hex from shoe webs by unscrewing self-tapping screws. Remove shoe retracting springs by sliding their looped ends off pins. Then remove shoe hold-down lock wires, castellated nuts and plain washers, and lift off shoes.

3) Thread each adjuster screw from shoe side of anchor supports. Lift star wheels from support slots. Do not attempt to remove a friction ring from a screw; if necessary, replace screw assembly instead. Remove two mounting bolts at each cylinder and remove cylinder and shield. Inspect backing plate and anchor supports to be sure they are clean and bolts are tight.

Installation – 1) Install wheel cylinder (with shield) making sure that longer cylinder end, measured from hydraulic port, will face toward shoe web toe and star wheel. Tighten mounting bolts securely. Insert star wheel in anchor support slots and thread in adjuster screws from shoe side, friction ring end toward shoe. For new linings, back off adjusters, taking care not to jam star wheels. Do not lubricate adjuster screws.

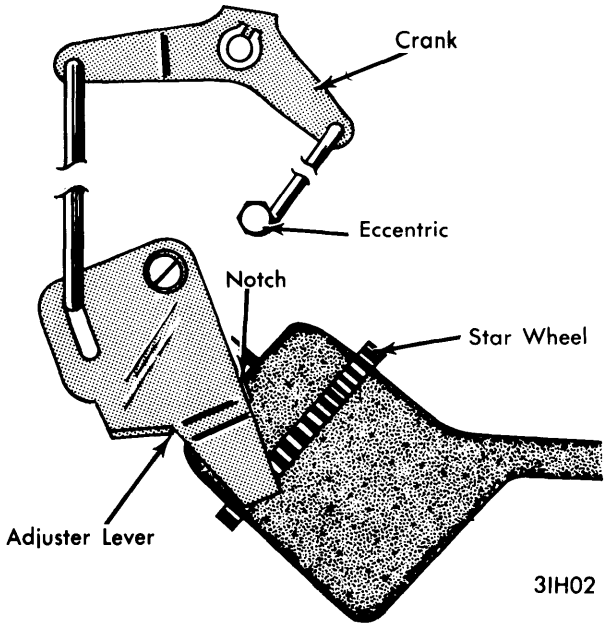
2) Install brake shoes by locating shoe with its toe (cut-away portion of web) positioned next to adjuster screw. Intall hold-down bolt, plain washer and castellated nut finger tight, then back off nut one turn and insert lockwire. Install retracting springs in shoe web, longest shank at adjuster, and hook springs over pins using brake spring pliers.

3) Install eccentric adjustment hex on each shoe web, tightening self-tapping screw only finger tight to permit final adjustment of eccentrics later in procedure. Locate crank levers on anchor pins, long arms toward shoes, and bushing toward backing plate, so that they rotate freely while resting against retracting spring hooks. Install and crimp "C" washers.

4) At each crank, assemble short link small hook into short arm of crank from lower side and hook other link end around eccentric adjustment hex. Assemble long link "S" hook to long arm of crank from upper side; rotate star wheel crank so that slot lines up with link "U" hook, then insert "U" hook and rotate star wheel crank back to approximately the adjusting position. Install adjuster spring with short hook on star wheel adjusting lever, so that its long shank hook assembles on upper groove of spring retainer pin from wheel cylinder side.

IHC DUAL CYLINDER DUO-SERVO AUTOMATIC ADJUSTER (Cont.)

5) Make initial manual adjustment of brake linings using following procedure: With drum still removed, back off star wheel adjustments. Insert pry tool against backing plate inner edge and shoe, and slide shoe up or down in anchor slots until leading edge and trailing edge of lining are equal distance from inner edge of brake backing plate. Set eccentric adjustment hex on each shoe web. Rotate eccentric hex until linkage aligns star wheel crank pawl with center line of adjuster screw. A small indent located on anchor support is aligning mark. Lock eccentric adjustment hex with self-tapping screw and install drum.



INITIAL MANUAL ADJUSTMENT

6) At each shoe star wheel, remove adjustment slot cover from exposed side of backing plate. Using star wheel, adjust each shoe out until it locks drum. Back off on shoe until drum rotates freely. Provide additional running clearance by backing off five to seven notches more. Replace slot covers.

WHEEL CYLINDER

See preceeding Brake Shoe procedure.

OVERHAUL

WHEEL CYLINDER

Disassembly & Reassembly – Remove dust caps and push pistons, cups, and spring out of cylinder bore. Wash all parts in clean alcohol. Examine cylinder bore for roughness or scoring. Dip spring, pistons, and cups in brake fluid and reassemble.

BRAKE SYSTEM SPECIFICATIONS

Application	Drum Diam.	Wheel Cylinder Diameter		Master Cylinder
		Front	Rear	Diameter
1510 MHC	14⅛"	....	....	....