



April 23, 2017

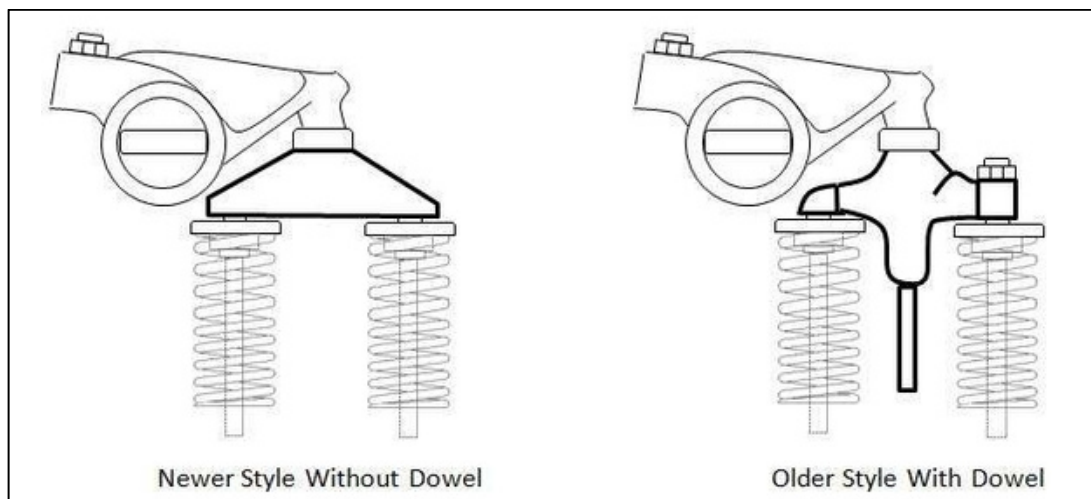
IPDTB-0008

## **CRITICAL INFORMATION – CAT® 3500 SERIES DIESEL VALVETRAIN UPDATES**

**The Cat® 3500 Series diesel valvetrain has had multiple updates. Using compatible valvetrain components is critical to the service life of the engine.**

### Floating Bridges:

- The update from the “doweled” valve bridge to the “float” bridges is common.
- On older style assemblies, the valve bridges rode on a dowel that was pressed into the cylinder head.
- Newer style floating bridges no longer require a dowel to ride on and eliminate the bridge adjustment. This update also introduced ½” diameter stem exhaust valves and required different Valve Seats, Valve Springs, Valve Guides, Rotators, Spring Washers & Valve Stem Seals.
- Since the release of the “floating” valves bridges there have been additional updates depending on specific applications.



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## NOTES:

There have been multiple component updates in these valvetrain components. Some of the changes have been global changes that updated parts everywhere they were used, while others have been specific to select machines or applications. IPD deals with rebuilders and parts suppliers around the world, some are very technical and make their own decisions as to which updates or combination of components work best in their situations. Others consistently want only the latest designs. And still, there are those that have had good experiences with what they've been using and want to continue using what works best for them.

This tech bulletin is not intended to be your only resource for parts reference, but rather to help explain some of the changes and make you aware of possible incompatibility issues. Please contact IPD for more specific application information, or reference IPDNet.

To help illustrate the complexity of the parts compatibility for the 3500 valvetrain, attached are lists of some compatible parts groups that we have found.

**These lists are for reference only! They are not intended to replace actual part number research or updates for your specific application.**



### 3500 Series Engine Valvetrain - Compatibility Parts Groupings

These lists are for reference only! They are not intended to replace actual part number research or updates for your specific application.

Era	Part	Description
<b>E A R L Y</b>	2102542	3/8" Stem 20° Valve,
	1219835	Exhaust 3/8" 45° Valve,
	1219839	Exhaust 3/8 Stem 45°
	1339306	Valve Guide (Intake &
	7N1903	Exhaust) 3/8" Inner Spring,
	7N1904	Counter Clockwise Coil,
	1976999	Pink & Blue Stripes Outer
	2A4429	Spring, Clockwise Coil,
	1302608	Pink & Blue Stripes
	1302607	RotoCoil (Intake &
	1302608	Exhaust) Lock (Intake &
	1376856	Exhaust) Insert, Exhaust
	2W2662	30° Insert, Intake 20°
	7N1902	Insert, Exhaust 45° Seal
	1294181	Spring, Seat Dowel Bridge
	2102542	Valve, Intake 3/8" Stem 20°
	2102529	Valve, Exhaust 3/8 Stem
	1339306	Valve Guide (Intake & Exhaust) 3/8"
	7N1903	Inner Spring, Counter Clockwise Coil, Pink & Blue Stripes
	7N1904	Outer Spring, Clockwise Coil, Pink & Blue Stripes
	1976999	RotoCoil (Intake & Exhaust)
	2A4429	Lock (Intake & Exhaust)
	1302607	Insert, Intake 20°
	1189491	Insert, Exhaust 45°
	1376856	Seal
	2W2662	Spring, Seat
	7N1902	Dowel
	1294181	Bridge
	7E4609	Valve, Intake 3/8" 30°
	1219839	Valve, Exhaust 3/8 Stem 45°
	9Y1847	Valve Guide (Intake & Exhaust) 3/8"
	7N1903	Inner Spring, Counter Clockwise Coil, Pink & Blue Stripes
	7N1904	Outer Spring, Clockwise Coil, Pink & Blue Stripes
	1976999	RotoCoil (Intake & Exhaust)
	2A4429	Lock (Intake & Exhaust)
	7E5862	Insert, Intake 30°
	1W1801	Insert, Exhaust 30°
	1376856	Seal
	2W2662	Spring, Seat
	7N1902	Dowel
	1294181	Bridge
<b>M I D</b>		

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Era	Part	Description
<b>M I D</b>	7E4609	Exhaust) 3/8" 30° Valve Guide
	9Y1847	(Intake & Exhaust) 3/8" Inner
	7N1903	Spring, Counter Clockwise Coil,
	7N1904	Pink & Blue Stripes Outer Spring,
	1976999	Clockwise Coil, Pink & Blue
	2A4429	Stripes RotoCoil (Intake &
	7E5862	Exhaust) Lock (Intake & Exhaust)
	1W1801	Insert, Intake 30° Insert, Exhaust
	1376856	30° Seal Spring, Seat Dowel
	2W2662	Bridge
	7N1902	
	1294181	
	2102542	Valve, Intake 3/8" Stem 20° Valve, Exhaust 1/2" Stem 45° Valve Guide 3/8" Valve
	1944897	Guide 1/2" Inner Spring, Clockwise Coil, Green & Orange Stripes Outer Spring,
	1339306	Counter Clockwise Coil, White Stripe RotoCoil (Intake) 3/8" RotoCoil (Intake &
	1976995	Exhaust)...See "Note A" below RotoCoil (Exhaust) 1/2" Lock (Intake) 3/8" Lock
	1944902	(Exhaust) 1/2" Insert, Intake 20° Insert, Exhaust 45° Seal 3/8" Washer Dowel Note B
	2816157	Bridge (Intake) Floating Bridge (Exhaust) Floating
	1977062	Only Required On 3500 Locomotive: 2348777 is serviced by 1977063 RotoCoil, & 2348776 Shield Only required on 3500MUI. Because of the force applied to the fuel injector by the rack, the 2390689 dowel is required for orientation of the fuel injector
	2348777	
	1977063	
	2A4429	
	1977055	
	1302607	
	1302608	
	1977006	
	3090962	
	2390689	
	2657537	
	2657538	
	Note A: Note B:	
<b>L A T E</b>	2102542	Valve, Intake 3/8" Stem 20° Valve, Exhaust 1/2" Stem 45° Valve Guide 3/8" Valve Guide 1/2"
	1944897	Inner Spring, Counter Clockwise Coil, Yellow Stripe Outer Spring, Clockwise Coil, Yellow
	1339306	Stripe RotoCoil (Intake) RotoCoil (Exhaust) Lock (Intake) 3/8" Lock (Exhaust) 1/2" Insert,
	1976995	Intake 20° Insert, Exhaust 45° Seal Washer (Exhaust) Bridge (Intake) Floating Bridge
	3165977*	(Exhaust) Floating
	3165976*	These parts must be used in conjunction with each other. Mixing with former designs will cause engine damage and/or failure
	3165978*	
	3165979*	
	2A4429	
	1977055	
	1302607	
	1302608	
	3165980*	
	3165981*	
	2657537	
	2657538	

\*Note: